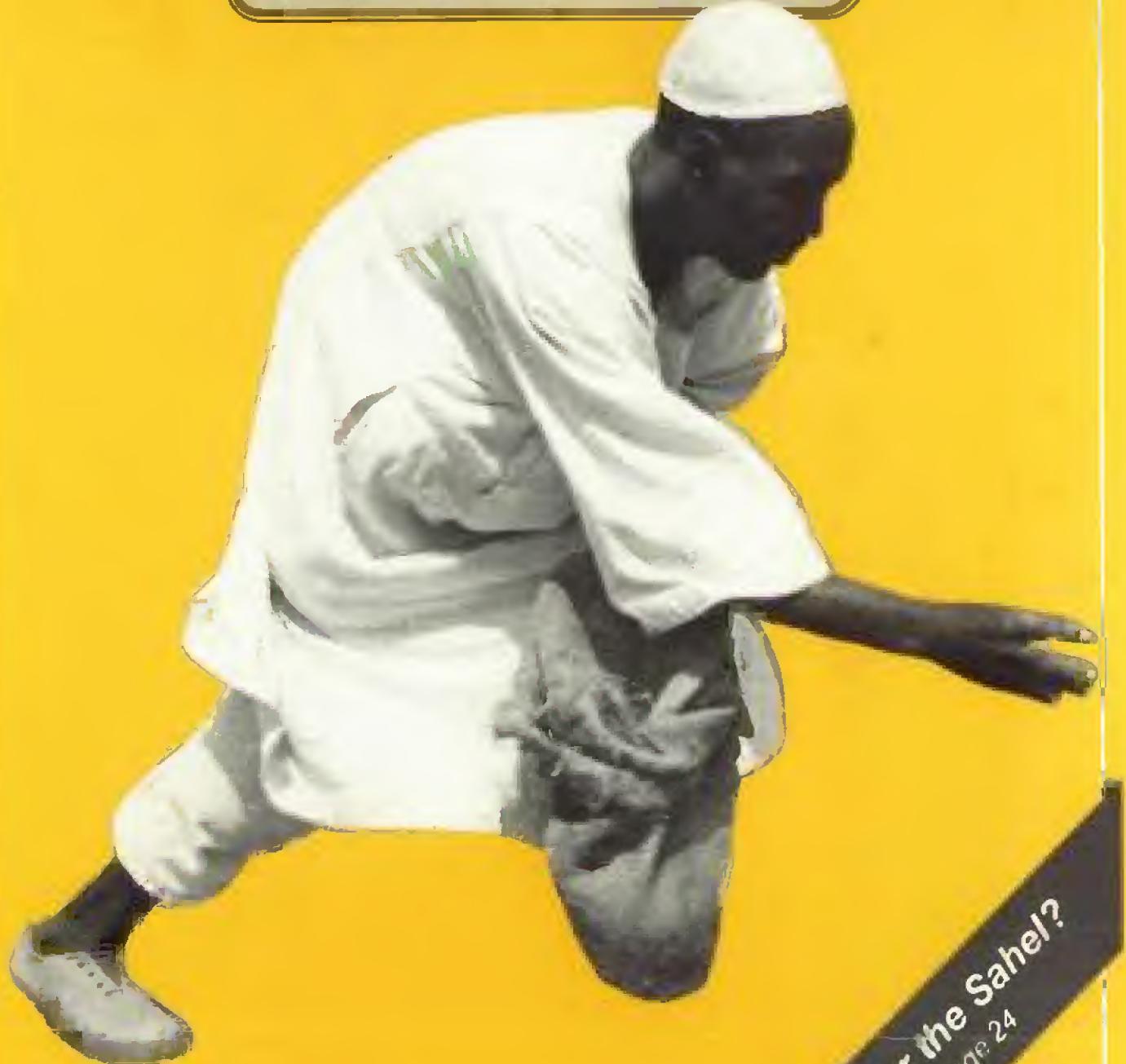


# AGRICULTURAL OUTLOOK

July 1989

Economic Research Service  
United States Department of Agriculture



Hope for the Sahel?  
See page 24

# AGRICULTURAL OUTLOOK

July 1989/AO-154

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# In

## Brief

### News of Farm Income, the 101st Congress, and the Sahel

Net farm income is expected to be \$47 to \$52 billion this year, about 10 to 15 percent above last year's drought-reduced level. Net farm income measures the value of annual production less costs. Most of last year's \$2- to \$3-billion decline was caused by the drought. And this year's increase reflects more planted acres and forecast higher production.

Farmers' net cash income, however, is expected to decline about 5 to 15 percent from last year's record \$58 billion. Net cash income measures the value of commodities sold less cash costs, and includes sales of stocks built up over earlier years. Last year's drought helped push 1988 net cash income up substantially as stocks were sold at high prices. This year's stock rebuilding will mean less net cash income. In inflation-adjusted dollars, neither net cash income nor net farm income will set a record, although both are near recent highs.

After major concerns about moisture in the early spring, storm systems that began cycling through the Midwest in May brightened the farm outlook. Rainfall in many areas of the country improved spring crop and forage potential, despite problems from too much rain in the Eastern Corn Belt. Nonetheless, many areas remain short of subsoil moisture and are vulnerable to any extended dry periods later this summer.

The rains came too late for the U.S. winter wheat crop. This year's winter wheat harvest is expected to be down 10 percent from last year, despite a 12-percent jump in planted area. Nonetheless, a strong spring wheat crop is projected to push up total U.S. wheat production by 12 percent. With beginning stocks down about 50 percent owing to last year's drought, this year's U.S. wheat supply is expected to be off 14 percent.

USDA expects a record-high world wheat crop for 1989/90, but consump-



tion likely will exceed production, and world stocks should continue falling while prices continue strong. With U.S. supplies down and increased production abroad, U.S. exports are expected to be off by 20 percent. Sales under the Export Enhancement Program have been slow.

U.S. feed grain production is forecast to rise 56 percent over last year's drought-reduced levels. U.S. soybean export volume is expected to rise 9 percent. Large U.S. cotton stocks and low foreign supplies likely will push up U.S. cotton export volume by 25 percent.

China's unusually large rice imports are fueling world rice demand. Strong global consumption should keep ending stocks low.

A surge in fed cattle supplies has weakened cattle prices, which will remain under pressure through early summer.

Broiler production likely will increase 5 to 7 percent in the last half of this year, as producers continue to post positive returns. Turkey production should also be up, but egg production is declining.

The 101st Congress, elected last fall, is interested in providing disaster relief to farmers, passing a 1990 farm bill, and setting farm policies to mesh with any trade agreements coming out of the current GATT negotiations. The Congress approved a nonbinding resolution with the Administration on the fiscal 1990 budget that calls for \$42.2 billion in outlays for USDA—a \$1-billion cut from fiscal 1989.

The Sahel of Sub-Saharan Africa is the only region in the world where population growth has outpaced growth in food production for the last 2 decades. Much of the region is locked into a vicious cycle in which increasing cultivation and grazing pushes down farm productivity; farmland literally becomes desert. While past development efforts have been disappointing, better on-farm soil and water management can markedly increase food production and farm income, while cutting erosion.

Negotiators in the Uruguay Round of the GATT have agreed on policy reforms that could phase down worldwide government agricultural support. According to several research studies, the reforms could have a major impact on the world wheat market. If all domestic support and trade programs worldwide were removed, the studies indicate, world wheat prices could jump by as much as one-fourth.

While the distribution of world wheat production and consumption would shift considerably, according to the research, total world trade in wheat would not change much. U.S. wheat farmers would face some short-term adjustment costs, but U.S. wheat exports likely would grow over the long term.



## Agricultural Economy

### Conditions Improve

A few inches of rain make a difference. Not too long ago, discussions of the 1989 agricultural outlook included the distinct possibility of another drought. Fall and winter rains had not completely recharged soils in many important farm areas.

The winter wheat crop was severely damaged by all sorts of weather-related events, with the western Corn Belt in particular suffering major soil-moisture problems. And extended weather forecasts indicated major dryness ahead for important growing areas.

Now, thanks to widespread rains, the outlook points to bountiful crops in 1989, except for winter wheat. Rainfall in many areas of the country improved spring crop and forage potential, despite problems from too much rain in the Eastern Corn Belt.

### Weather Patterns More Favorable

Weather patterns changed sharply in late May. Storm systems began cycling through the Midwest on a regular basis. Extended weather forecasts became more encouraging, with predictions of normal summer weather over the eastern two-thirds of the country.

This good news, of course, does not guarantee high yields in 1989, yet it contrasts starkly with the hot-dry forecasts

released at this time last summer. But with many areas short of subsoil moisture, frequent summer rains will be needed, especially following corn's pollination stage.

Corn and soybeans in areas with inadequate subsoil moisture will not be able to make up for extended dry periods by pulling moisture from deep in the soil. They will quickly show stress should conditions turn hot and dry for any extended period.

Many Eastern Corn Belt farmers delayed planting corn and soybeans because of too much rain. This limits the potential yield. Also, later planting pushes corn pollination into the hotter part of the summer, and increases the likelihood of crop damage from an early frost.

But even with these concerns, corn and soybean yields this year likely will be much improved.

If this summer's weather is, in fact, close to normal, market disruptions from last summer's drought will wane. Large grain stocks on hand at the beginning of 1988/89 will cushion the impact from the smaller 1988 crop until this year's harvest begins in the fall.

Larger 1989 grain and oilseed crops would lower livestock and poultry feeding costs and support continued large livestock production. Crop consumption could increase, and stocks might be nudged a little higher.

### *The Exception: Winter Wheat*

However, improved summer moisture conditions will not help winter wheat farmers. They are bearing the brunt of the weather problems that started last fall and continued into the spring. Estimates call for a 10-percent-smaller winter wheat crop, even though 12 percent more acres were seeded.

Spring wheat farmers, who suffered one of the worst droughts ever in 1988, are faring much better this year. With larger plantings and a strong rebound forecast for spring wheat yields, the total wheat crop is expected to be up 10 to 15 percent. However, total wheat supplies will remain tight and stocks may drift a little lower by the end of 1989/90.

### *Meat Production To Be Largely Unaffected*

The late winter-early spring dryness in the western Corn Belt also caused many livestock producers to reassess their production plans. In some areas, stock ponds and streams were low. Coupled with poor forage conditions and high hay prices, the low water supplies caused stockmen to cull their herds early this year. As a result, cow slaughter jumped up for a few weeks.

The recent rains have improved pasture and range conditions. Nonetheless, forage conditions remain generally poor in the western Corn Belt and the Plains. However, if rains continue, many farmers may be able to rebuild hay stocks for the winter feeding season.

Pork production is forecast to be about as large as it was last year. Beef production is expected to fall by 2 percent. Broiler output continues to respond to strong domestic and foreign demand, and is forecast to grow about 5 percent in 1989.

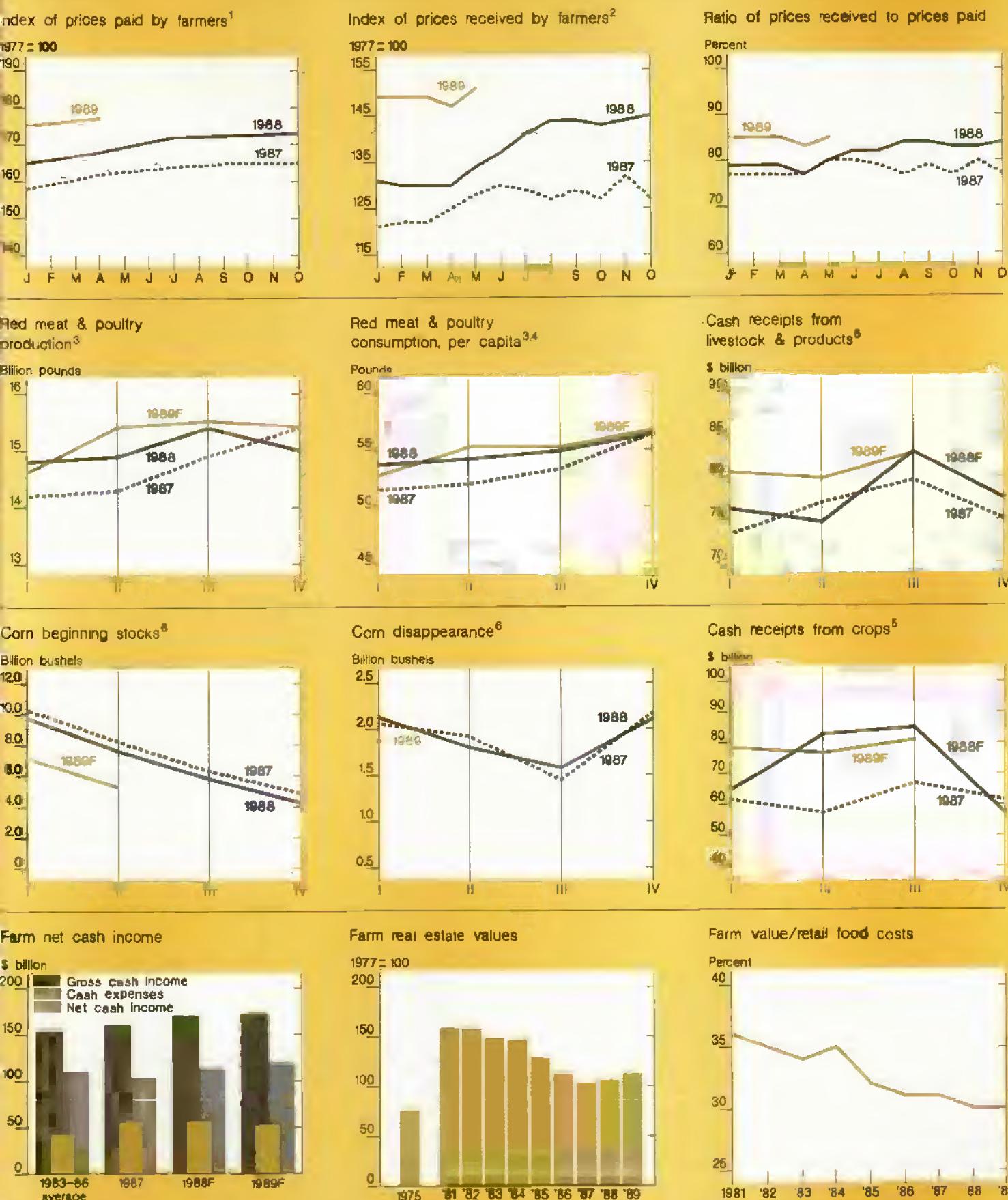
Fruit and vegetable supplies were cut by last year's drought. There was considerable concern this past winter about irrigation water supplies in the West. While mountain snowpack and moisture conditions have been less than ideal, the moderate irrigation water shortfall may have little impact on fruit and vegetable production. And with near-normal weather this summer, production of potatoes, processing fruits and vegetables, and most fresh items will be up.

### *Cautious Optimism Marks the Outlook*

Unless the weather turns dry or becomes too wet over an extended area of the country later this summer, there will be large harvests of food crops. Along with plentiful meat production, the outlook points to continued abundant supplies of food.

With the exception of some winter wheat growers, farmers recovering from the early 1980's financial problems will collect record-high receipts. While crop prices will decline as expectations of more abundant harvests come closer to realization, farmers' incomes are nonetheless expected to remain near the past few years' record highs. (Don Seaborg (202) 786-1880)

# Prime Indicators of the U.S. Agricultural Economy



<sup>1</sup>For commodities and services, interest, taxes and wages. Beginning in 1986, data are only available quarterly. <sup>2</sup>For all farm products.

<sup>3</sup>Calendar quarters. Future quarters are forecasts for livestock, corn, and cash receipts. <sup>4</sup>Retail weight. <sup>5</sup>Seasonally adjusted annual rate.

<sup>6</sup>I=Dec.-Feb.; II=Mar.-May; III=June-Aug.; IV=Sept.-Nov. F=forecast

## Livestock, Dairy, and Poultry Overview

*Timely rains have improved spring crop prospects, so forage and feed costs are falling. A surge in fed cattle supplies has weakened cattle prices, which will remain under downward pressure through early summer.*

*Hog producers' losses since last fall have sapped their financial strength. So hog production decisions will depend critically upon what happens to feed prices this summer.*

*Broiler production is expected to increase 5-7 percent in the last half of 1989, as producers continue to enjoy positive net returns. Turkey production will also be up, but egg production is declining. Dairy product demand shows unusual strength; prices rose during the heavy supply period this spring.*

### Feedlots Market Cattle Ahead of Schedule

Large numbers of cattle in the pipeline have caused slaughter cattle prices to decrease since late March, prompting feedyards to market cattle earlier and at lighter weights. Average slaughter weights decreased by 10 pounds for steers and 12 pounds for heifers from March to May. The proportion of federally inspected steers and heifers graded Choice decreased from a 92.3-percent average in 1988 to 89.7 percent in May. Select grade carcasses increased from 4 to 6 percent.

Dry weather, poor pasture/range conditions, and low hay stocks in early spring resulted in high feeder cattle placements. In April, net placements were up 2 percent from a year earlier and 4 percent from the 1972-88 average.

Increased rainfall, favorable grain crop estimates, and tight supplies have maintained 700-800 pound feeder steer prices in the \$77-\$79 per cwt range. Cow slaughter has begun to decline as forage conditions improve.

### Cattle and Beef Prices Expected To Decline

Though slaughter cattle prices declined less than \$1 per cwt during May, to

about \$74.50, prices may be in the \$69-\$72 range through the early summer. The differences between Select and Choice grades in May were \$9.27 for carcasses and \$7.48 for boxed cutout beef.

These relatively large margins have been maintained because supplies of Choice cattle have not met the demand for Choice beef, despite increased marketings. Supplies of Choice cattle should increase as larger numbers of fed cattle become available at more normal market weights.

Cattle on feed reports from January through May indicated increased placements into feedlots. However, the 7-State cattle-on-feed report for June 1 showed a 25-percent decline in feedlot placements during May, in addition to a 1-percent increase in marketings. The heavy placements of cattle seen from January through April should reach markets this summer, resulting in increased beef supplies.

Retail Choice beef prices reached record levels in May but are expected to decline into summer, partly because of the increased production and already lower cattle prices.

### Hog Production Plans Depend on 1989 Crops

Hog producers' breeding and farrowing plans will closely reflect prospects for this year's corn and soybean crops. Many producers have endured losses since last fall, so their plans will be especially sensitive to feed costs. An unexpected below-average harvest this year likely would prompt large-scale liquidation and sharp production cutbacks in 1990.

Breeding herds began to decline last summer, as escalating feed costs cut into producers' returns. However, the reduction between June 1988 and this March was modest compared with other years when producers were caught in a cost-price squeeze. By midwinter, breeding inventories began to stabilize.

One factor that may have buffered herd liquidation is that hog producers entered last year's drought in a relatively strong financial position. Net returns in both 1986 and 1987 were the highest in recent history.

As this year's crops approach their critical growth stages, hog producers are again being squeezed financially. Three successive quarters of losses have tapped reserves. And recent market conditions have provided little optimism.

Despite a seasonal upturn in hog prices, preliminary estimates indicate that average net returns this spring will be the lowest of the current cycle. If normal crop conditions prevail, feed costs likely will decline, and net returns to hog producers will improve. Then breeding inventories would stabilize by yearend.

### Broiler Production Expansion Continues

Strong prices continue to encourage broiler expansion. Producers' net returns averaged 9 cents per pound in the first quarter, compared with 6 cents in fourth-quarter 1988, and they likely continued strong in the second quarter. Production is expected to increase about 5 percent this year and set another record. First-half production will be about 4 percent greater than in 1988, and second-half production is expected to be 5-7 percent greater.

The 12-city composite wholesale price for June likely averaged about 10 cents above May's 57 cents. Second-quarter prices probably were 67-68 cents per pound, well above the 56 cents of a year earlier. Wholesale prices for the third quarter may average 65-69 cents, while prices in the fourth quarter may be 55-61 cents.

### Broiler Exports Up Substantially

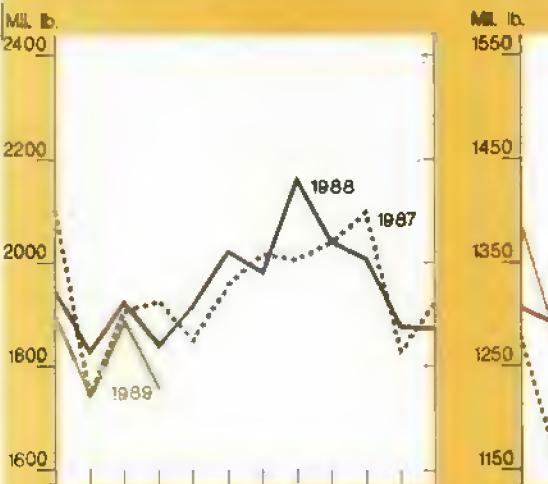
Broiler exports during the first quarter were up 31 percent from a year earlier, reaching a record 213 million pounds. Total value increased 35 percent to \$98.6 million. Japan took 81 million pounds, 71 percent more than a year earlier and 38 percent of the total. Hong Kong, Mexico, Singapore, Jamaica, and Canada were also large buyers.

### Turkey Production Expected Up, But Exports Down

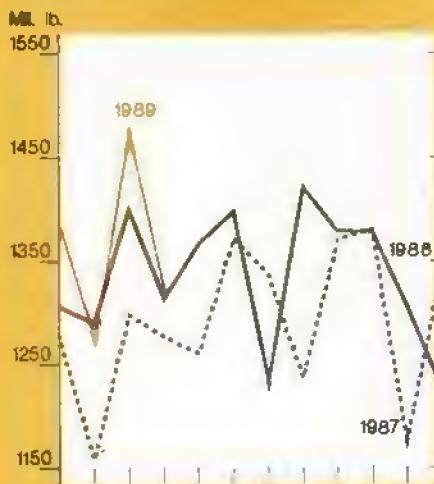
Turkey production increased in May, after losses pushed output down from a year earlier for the first 4 months of

# Production of Livestock and Products

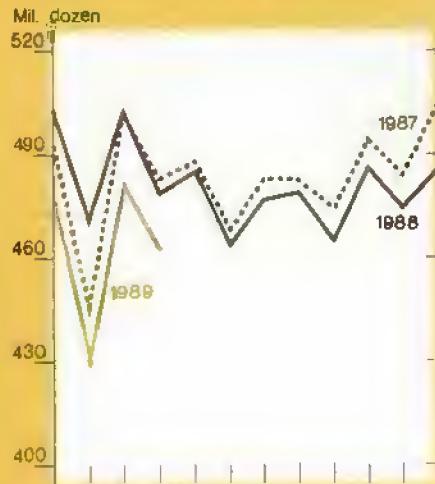
## Commercial beef



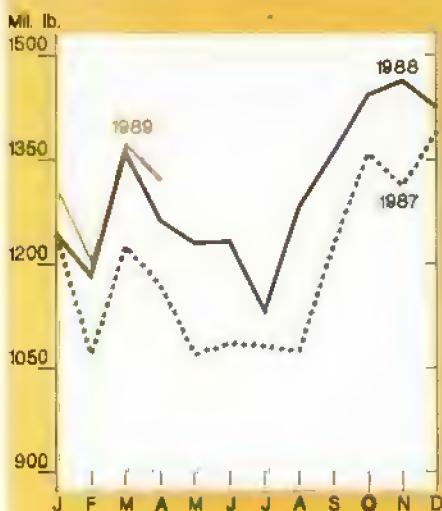
## Broilers<sup>1</sup>



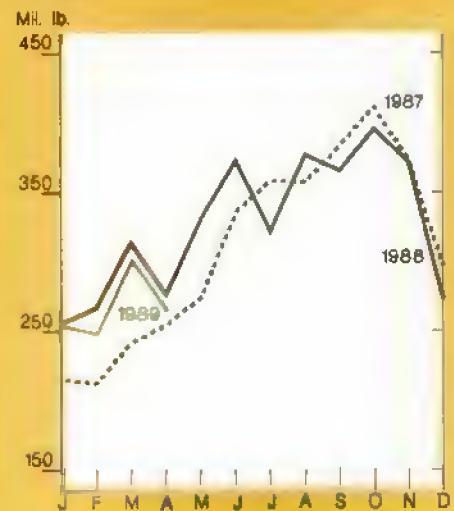
## Eggs



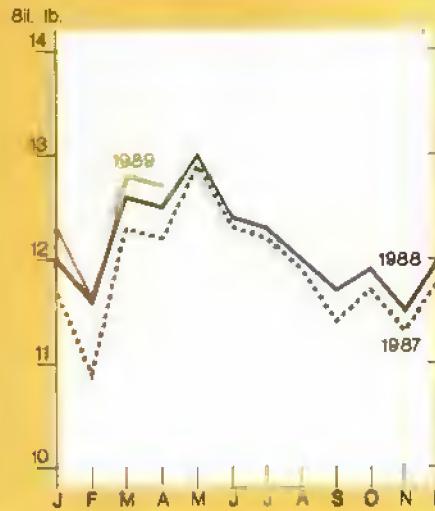
## Commercial pork



## Turkeys<sup>1</sup>



## Milk



<sup>1</sup>Federally inspected production, ready-to-cook

1989. Production for the year is expected to increase about 3 percent. The rate of poult placements has increased. April placements were 7 percent ahead of a year earlier, and cumulative placements from last September were 4 percent above a year earlier.

Turkey prices have increased steadily since January, and Eastern region wholesale prices for hens and toms, at about 72 cents per pound during May, were 48 percent higher than a year earlier. Prices for the year may average 70-73 cents per pound, about 17 percent above a year earlier.

About 8 million pounds of turkey meat were exported in the first quarter, down 40 percent from a year before. Higher prices contributed to the decline. Average export unit value was up 35 percent during the first quarter to 54 cents per pound. Mexico accounted for nearly 30 percent of total turkey exports, while Hong Kong accounted for 10 percent.

### Egg Production, Exports Decline

Total table egg production is expected to drop about 4 percent in 1989, reflecting prolonged low returns. First-quarter production was more than 6 percent below last year. The table-egg-type laying

flock on both April 1 and May 1 was about 5 percent smaller than a year earlier, indicating a decline of about 4 percent in second-quarter production. Third- and fourth-quarter production is expected to be down 3 percent and 2 percent, compared with a year earlier.

Wholesale New York egg prices averaged 78.6 cents per dozen in the first quarter. Prices are expected to average 74-75 cents for the second quarter.

Wholesale prices for the rest of the year should reflect seasonal patterns, but remain well above 1988. Net returns to producers were about 11 cents per dozen for the first quarter, and are expected to be positive for the rest of 1989.

Egg exports during first-quarter 1989 totaled about 24 million dozen equivalent, down 30 percent from a year earlier. Table egg exports dropped sharply to about 4 million dozen, and were only 16 percent of total egg exports, compared with 30 percent a year ago. A decline in Export Enhancement Program sales to the Middle East was the major factor.

#### **U.S. Dairy Product Prices Rise Earlier Than Usual**

International and domestic demand for nonfat dry milk continued very strong during the second quarter of 1989. International prices soared to as much as 90 cents per pound. Domestic prices remained above the support purchase level and experienced an earlier and more rapid seasonal rise than usual.

Generally, domestic wholesale dairy product prices remain near their seasonal lows during April-June, when milk production is at an annual peak. However, competition for available milk supplies has led to a countersessional rise in nonfat dry milk prices, as well as in cheese prices.

As international dairy product prices have shown strength since mid-1988, the U.S. has become a prominent participant in commercial export markets. At the same time, U.S. imports of foreign manufactured dairy products have declined, and domestic products have become much more attractive.

As demand for U.S. nonfat dry milk increased, cheese manufacturers found it more difficult to bid milk away from butter-powder plants. Consequently, wholesale nonfat dry milk prices, farm milk prices, and wholesale cheese prices rose countersasonally during the second quarter.

Wholesale nonfat dry milk prices increased more than 4 cents during April-May. The Minnesota-Wisconsin price for manufacturing grade milk reached \$11.12 per cwt during May, 3 cents higher than in April and 14 cents above March. Wholesale cheese prices increased more than 5 cents during April-May.

International nonfat dry milk prices are expected to remain strong during the second half of 1989, and domestic prices

probably will continue to rise. Cheese prices can also be expected to rise.

For further information, contact: Ken Nelson, coordinator; Fred White, cattle; Kevin Bost, hogs; Lee Christensen and Larry Witucki, broilers, turkeys and eggs; Sara Short and Jim Miller, dairy. All are at (202) 786-1285.

#### **Field Crops Overview**

*Improved global grain and oilseed crops are likely in 1989/90. For grain, both harvested area and yields probably will rise because of improved weather in many countries, including the U.S., Canada, and Argentina. Global grain output is forecast at almost 1,680 million metric tons, up 8 percent from 1988/89.*

*U.S. grain production is forecast to expand 44 percent. U.S. exports of soybeans are expected to rise in 1989/90 as the crop rebounds from the 1988 drought. Large U.S. cotton stocks and low foreign supplies will combine to push U.S. cotton exports to their second highest since 1956/57.*

#### **Wheat Prospects Generally Encouraging**

Despite poor growing conditions for much of the domestic winter wheat crop, winter and spring wheat outturn combined are forecast at 2,028 million bushels, about 12 percent above last year. However, USDA survey results show this year's winter wheat crop, at 1,408 million bushels, may be the smallest in the last 10 years.

Dry conditions early this season, winterkill, and April temperatures greater than 100 degrees are behind the low hard red winter wheat projection. At 683 million bushels, the forecast is the lowest since 1978 and more than 20 percent below 1988/89.

Reduced Acreage Reduction Program (ARP) requirements and expected continued high prices significantly boosted the winter wheat planted area in many States, including Kansas, Texas, Oklahoma, and Nebraska. Yields are now likely to fall sharply in these States. Production declines of 30-40 percent are expected in Kansas and Oklahoma.

In contrast, last year's spring wheat bore the brunt of the 1988 drought, and winter wheat yields supported 1988/89 production. Assuming normal yields and abandonment this year, and based on planting intentions, the spring wheat crop is projected to rebound to about 620 million bushels.

Total wheat supply for 1989/90 is down significantly from last year, and is off by almost one-third from 1987/88. The decline results from a 50-percent drop in beginning stocks, and has pushed the 1989/90 average price forecast to \$3.80-\$4.20 per bushel, up from \$3.74 a year earlier.

A record world wheat crop is forecast for 1989/90, but consumption is projected to exceed production, causing stocks to fall further and prices to rise. Large foreign crops and relatively high prices are expected to cause a small drop in world wheat trade. Competitor production likely will be the second largest on record, while U.S. supplies are tight. So U.S. exports are forecast to drop 20 percent, and the U.S. share of the world market will be down sharply.

U.S. exports of a projected 31.3 million metric tons would be the smallest since 1986/87. Importers' early season demand for U.S. wheat, particularly for hard red winter, has been slow. Soft red winter has been buoyed by large sales of new-crop wheat to China, which in recent weeks has purchased about 3 million tons. None of China's recent purchases has been under the Export Enhancement Program (EEP). Recent sales activity under the EEP has been slow and few new initiatives have been offered.

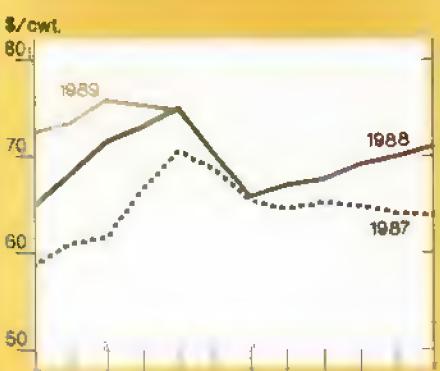
#### **U.S. Feed Grain Supply Forecast Up**

Domestic feed grain production for 1989/90 is projected to reach 234 million tons. This is based on substantial yield gains for corn, barley, and oats from last year's drought-reduced yields. And planting intentions are up nearly 6 percent. Abandoned area may be lower as well.

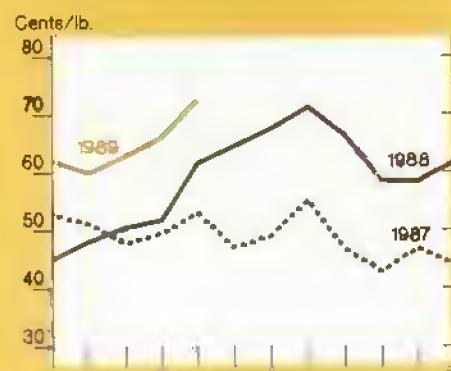
Feed grain beginning stocks for 1989/90 are projected to be under 62 million tons, down more than 50 percent from 1988/89. Expected production gains,

# Commodity Market Prices

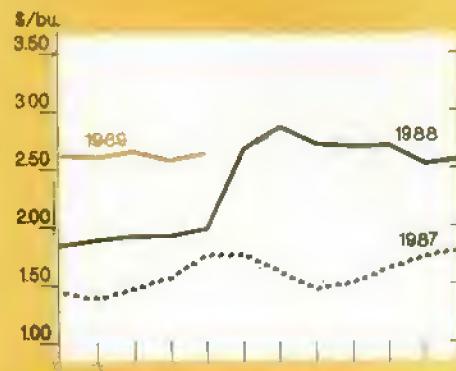
Choice steers, Omaha



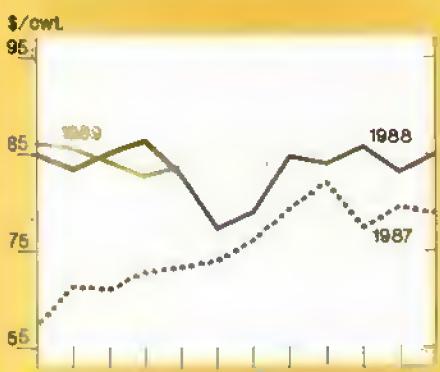
Broilers, 12-city average



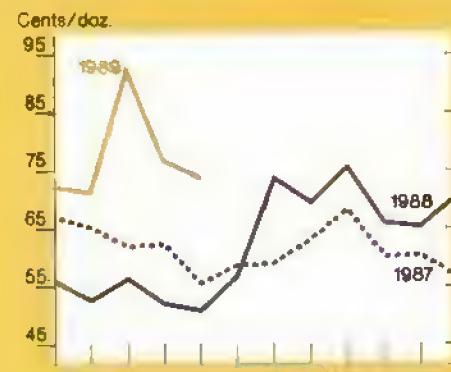
Corn, Chicago<sup>3</sup>



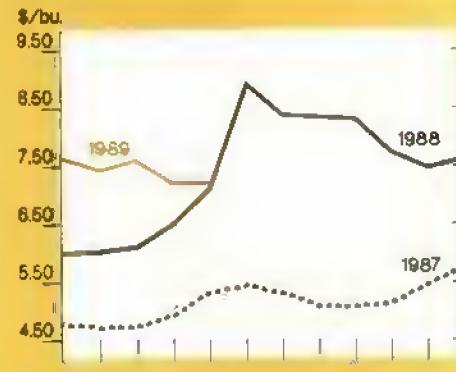
Feeder cattle, Kansas City<sup>1</sup>



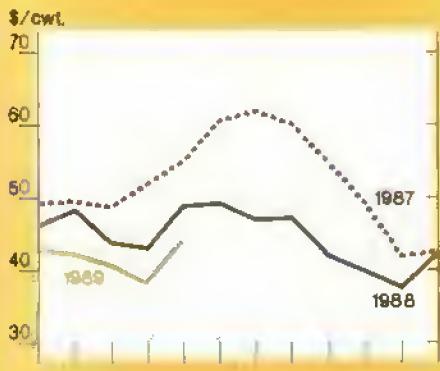
Eggs, New York<sup>2</sup>



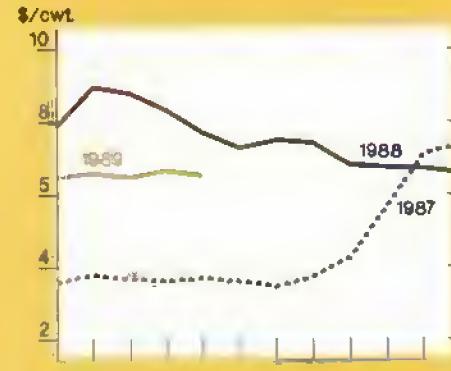
Soybeans, Chicago<sup>4</sup>



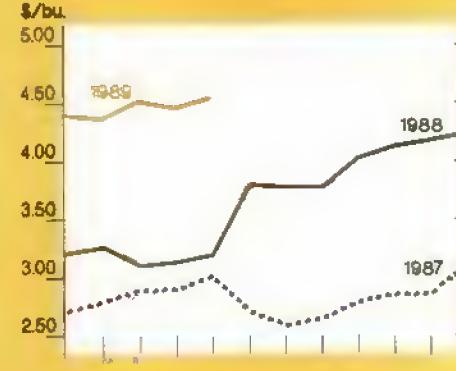
Barrows and gilts, 7 markets



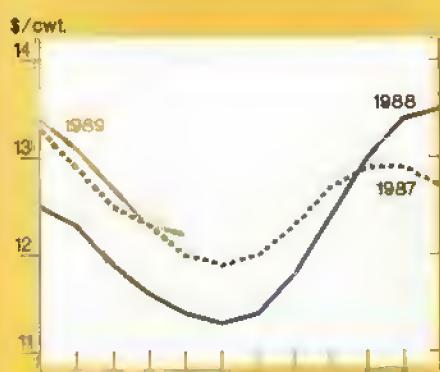
Rice (rough), SW Louisiana



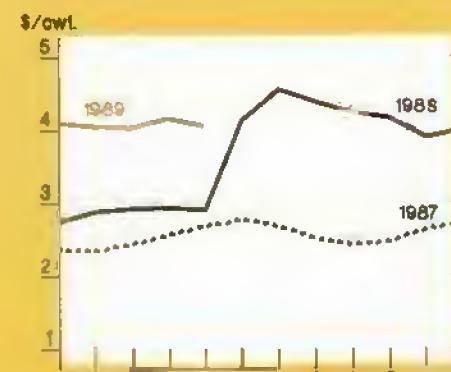
Wheat, Kansas City<sup>5</sup>



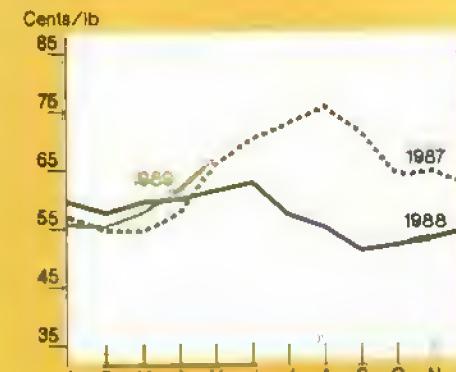
All milk



Sorghum, Kansas City



Cotton, average spot market



however, are forecast to boost total supplies to 296 million tons, up about 4 percent from a year earlier. Total domestic use may expand by 9 million tons to around 170 million.

Sharply higher feed grain prices have apparently caused some consumers to cut use. Feed and residual use of corn, for example, during September 1988-February 1989 was down about 18 percent from a year earlier.

Industrial corn use was up during the same 6-month period. High corn sweetener prices have apparently boosted production, even with higher input prices. Both ethanol and starch production are expected to remain constant in 1988/89.

U.S. feed grain exports are rising dramatically in 1988/89, mostly because of much larger Soviet purchases. As of June 8, U.S. corn sales to the Soviet Union reached 16.5 million tons, surpassing the 1984/85 record. The Soviets also made their first significant purchases of U.S. sorghum this year, taking 1 million tons.

While declining stocks pushed world prices up in 1988/89, prices are likely to ease somewhat as greater supplies become available in 1989/90. World production is forecast to jump 14 percent to 824 million tons, mainly reflecting the rebound in U.S. crops.

#### Rice Demand Booms

High prices brought on by short supplies prompted world rice importers to cut purchases in calendar 1988. World exports fell 1 million tons.

With good weather, 1988/89 world production rebounded by 11 million tons (milled basis). As supplies grew and prices fell, many importers began rebuilding depleted stocks. World trade is likely to jump 12 percent to 13.2 million tons in calendar 1989, the largest since 1981.

China's abnormally large purchases are fueling world demand for rice. China's imports are expected to reach 1.2 million tons in 1989, while its exports are forecast to fall by nearly half to only 400,000 tons.

The drop in China's exports is being partially offset by strong gains elsewhere. Vietnam is forecast to export 650,000 tons in 1989, more than 300,000 tons over its 1981 record. Monthly Thai exports also have been running at record levels since last August. Thai exports are projected at a record 5.3 million tons in calendar 1989. U.S. exports are forecast to rise 11 percent.

Modest foreign production growth is likely in 1989/90. U.S. output is expected to remain constant at 5 million tons. But consumption growth is expected to continue into 1989/90, keeping world stocks low.

#### U.S. Cotton Exports Could Soar

The 1989 domestic cotton crop is projected at 13.5 million bales, 12 percent below last year. A USDA survey indicates that 11 million acres could be planted this year, down significantly from 1988/89 as a result of heightened ARP requirements.

Purchases of U.S. cotton could increase by 1.6 million bales for 1989/90. Domestic mill use is likely to rise to 7.5 million bales. Declining textile inventories, increased denim production, and competitive cotton prices should lead to higher consumption. However, continued growth in textile imports will likely limit gains.

U.S. cotton stocks at the end of the 1988/89 marketing year probably will total 7.9 million bales, almost twice the level specified in the 1985 Food Security Act. Reduced export demand and lower cotton prices earlier this season resulted in record CCC loan placements. Producers placed 11.2 million bales of the 1988 cotton crop under Government loan.

With world production up 5 percent and consumption flat in 1988/89, world year-end stocks are likely to rise. All of the gain will occur in the U.S. Competitive bidding early in the season enabled foreign exporters to capture a large share of early 1988/89 exports, pulling estimated foreign ending stocks to the lowest since 1983/84.

The 1988/89 season has been unusual for U.S. cotton exports. In the first 6 months, export prospects appeared relatively bleak owing to uncompetitive U.S.

prices. Then in January, for the first time in 5 years, China began importing significant quantities. China's purchases drew down foreign stocks, forcing prices up sharply and making U.S. cotton competitive again. And many importers boosted purchases in anticipation of still higher prices.

Because U.S. stocks are now the most plentiful, the U.S. is making a larger share of late-season 1988/89 sales. U.S. exports for 1988/89 are now estimated at 6.0 million bales, up 1.3 million from the season's lowest projections.

But price gains came too late to affect 1989/90 planting in the Northern Hemisphere. Both world and foreign area totals are expected to drop, pulling world production down 2 percent. Foreign production is projected at 69 million bales, virtually unchanged from 1988/89.

But 1989/90 foreign consumption is forecast to grow about 2 percent, as stronger economic growth in developed countries and a renewed consumer preference for denim improve textile demand. Flat production and rising consumption are expected to pull foreign stocks below their already low levels.

With tighter foreign stocks, still-plentiful domestic stocks, and competitive U.S. prices, the U.S. has an opportunity to increase exports again in 1989/90. A jump to 7.5 million bales is forecast, accounting for a 29-percent share of world trade, up from only 24 percent in 1988/89.

#### Soybean Prices Continue Down, Foreign Production Improves

The bulk of the 1988/89 soybean crop has been harvested in South America, and foreign production is setting a record. Brazil's production will be a record at 22 million tons, although Argentina's output is down sharply to 7.3 million. World supplies remain 8 percent below the previous season owing to last year's U.S. drought and low stocks.

Consumption and exports in 1988/89 also have been limited; consumption is estimated at only 99.7 million tons and exports at 23.9 million. Still, world use is exceeding production, so ending stocks are likely to fall 28 percent to 14.2 million tons.

Domestic soybean and soybean product prices continued down from their September highs. Soybean prices (no. 1 yellow, Central Illinois) averaged \$7.24 a bushel in May, compared to \$7.60 in March. Declines were prompted by the improving outlook for 1989/90 U.S. production and the record 1988/89 South American crop. Domestic crush appears to be in its seasonal decline, but soybean meal exports are showing unexpected strength because of slow South American marketings.

U.S. domestic vegetable oil use for October-April trailed a year earlier by 3 percent. Soybean oil use was down about 4 percent. Higher U.S. soybean oil production, now estimated at 5.34 million tons, coupled with sluggish use, has helped to maintain record oil stocks. Soybean oil ending stocks for 1988/89 are estimated at 1 million tons, 8 percent above 1987/88. [James Cole (202) 786-1840 and Carolyn Whitton (202) 786-1826]

For further information, contact: Sara Schwartz, world food grains; Edward Allen, domestic wheat; Janet Livezey, domestic rice; Pete Riley, world feed grains; James Cole, domestic feed grains; Bob Cummings, world oilseeds; Roger Hoskin, domestic oilseeds; Carolyn Whitton, world cotton; Bob Skinner, domestic cotton; Jim Schaub, domestic peanuts. World information (202) 786-1824; domestic (202) 786-1840.

## High-Value Crop Overview

*Grower prices for potatoes surged this spring as processors and tablestock buyers scrambled to acquire needed supplies from dwindling stocks. Retail prices of all fresh vegetables jumped 23 percent from last May because of higher potato and tomato prices and strong demand for all fresh produce. Peach and bartlett pear production will slip 9 and 5 percent this summer.*

*As the new nut marketing year begins, U.S. almond output is forecast to drop almost one-fourth. Walnut shipments for the marketing year ending this month are down.*

*Sugar deliveries rose slightly in 1988, marking a second year of growth after a decade of declines.*

### *Robust Potato Prices Lead The Vegetable Market*

Potato prices are double those a year ago, creating optimism among growers this spring. But this could lead to substantially higher plantings for the fall crop and sharply lower prices in the next marketing year. Preliminary grower prices averaged \$10.50 per cwt in May, compared with \$4.62 during the same month last year.

The higher prices stem from the drought-reduced 1988 production and currently low stocks. The 1988 crop totaled 350 million cwt, 9 percent less than a year earlier. Holdings of fresh potatoes on May 1 were 22 percent lower than a year earlier.

Competition among processors for storage potatoes appears to be another reason for the unusually high spring prices. Despite the drop in total production, processing use is off only 2 percent from 1987/88.

Potato growers typically increase planted acreage following a spring of high prices. The initial report of planted acreage for the important fall crop will be released on July 12. The average price typically falls about 4 percent for each 1-percent rise in total production.

Consumer prices for fresh potatoes in May were 43 percent higher than a year earlier, compared with the 127-percent surge in grower prices. Prices usually change by a much smaller percentage at the consumer level than at the grower level because consumer prices reflect more marketing, transportation, processing, and packaging costs.

Tomato shipments from mid-April to early May were off 25 percent from the year before because freezes in Florida damaged young plants early this past winter.

The May index of retail prices for all fresh vegetables stood 23 percent above a year earlier. In addition to specific potato and tomato price pressures, use of salad bars in restaurants and grocery stores, and growing consumer awareness of fresh produce's nutritional value are pushing up vegetable prices.

### *Smaller Output, Higher Prices For Summer Fruits*

June 1 estimates for the major summer fruits indicate that peach, bartlett pear, nectarine, and plum output will fall short of 1988, while apricot and Western sweet cherry supplies will rise. Smaller supplies of peaches and pears likely will sustain grower prices.

Freestone peach output is expected to be 16 percent lower than in 1988; all the major growing areas except Michigan report lower prospects. Freeze damage during the critical March and April bloom period reduced pollination and fruit set in Georgia and South Carolina.

California's clingstone production, which is mostly canned, is expected to be fractionally higher than last season. Growers' prices for fresh peaches likely will at least match returns from last year, when drought in the central and eastern U.S. limited supplies from some areas.

Bartlett pear production in California, Oregon, and Washington is forecast down 5 percent from last year. Unusually severe damage in Washington from fire-blight bacteria is cutting production there. Growers' prices likely will surpass last summer.

Tart cherry output may fall below the abbreviated 1988 harvest. Last summer's drought caused tree damage and reduced fruit bud formation in Michigan. Frosts this spring caused further damage. Michigan typically produces about 75 percent of U.S. tart cherry output. However, June 1 estimates indicated higher production this year in Oregon and Utah.

### *Outlook Bullish for Almonds*

The 1989/90 marketing year (July-June) should be good for almond growers. USDA's June 1 production forecast placed 1989 output at 450 million pounds, down 24 percent from last year and 32 percent below the 1987 record.

Almond shipments for the first 10 months of the 1988/89 marketing year (July 1 to April 30) were 11 percent ahead of a year earlier. Domestic shipments were up nearly 13 percent, and exports were up 10.5 percent.

The Almond Board of California decided to release 141 million pounds of 1988-crop almonds held in unallocated reserve under provisions of the Federal marketing order. These almonds become available August 1 and will bring marketable supplies closer to 1988/89.

Higher prices and a smaller expected crop likely will cut almond exports in 1989/90. Continued strengthening of the dollar also would raise U.S. prices in several major foreign markets, further dampening exports.

Moreover, Spain is expecting near-record production in 1989, and Italy and Greece are also looking for better-than-average crops. Spain is the world's second largest almond producer after the U.S.

EC countries likely will use more from Spain at the expense of U.S. exports. West Germany was the largest foreign buyer of U.S. almonds during the first 10 months of 1988/89, taking two-fifths of all foreign sales.

#### *Walnut Shipments Down*

Walnut shipments in 1988/89 (August-July) for both shelled and unshelled nuts were running below a year earlier. Ample supplies of almonds and pecans apparently dampened demand.

Export sales to Japan were the bright spot. Japan's imports of U.S. walnuts over the first 9 months were up about a third from a year earlier. Since then, there has been very little buying or selling of either almonds or walnuts, because major dealers have withdrawn from the market until current-season production becomes available.

Market activity is slow for the other tree nuts also. Filbert, pecan, and pistachio dealers are waiting for new-crop production. Macadamia acreage and production continue to expand.

#### *Sugar Use Up Slightly in 1988, But Future Uncertain*

Sugar deliveries for domestic use rose slightly (0.25 percent) in calendar 1988, but fell short of the growth in high-fructose corn syrup (HFCS) and low-calorie sweetener use. This was the second consecutive year of growth in sugar use.

Nevertheless, the pace of deliveries during the last three quarters of 1988 and the first quarter of 1989 was slowing, raising doubts about sustained growth.

Refiners' deliveries are one measure of total consumption. First-quarter 1989 deliveries were down 2.5 percent from a year earlier because of a 20-percent drop in beet sugar deliveries. Drought in the Midwest and disease problems in California cut 1988 sugarbeet production 12 percent from 1987. Despite a good cane crop and a higher import quota, beet sugar prices averaged 29.5 cents per pound in Midwest markets during March 1989, compared with 22.75 cents a year earlier.

Beet sugar users appear to be cutting back on purchases by reducing their stocks in anticipation of more normal sugarbeet yields and production in 1989 and consequent lower prices. Prospective sugarbeet acreage for 1989 is essentially unchanged from 1988.

A 10-year decline in total sugar consumption was reversed in 1987 when HFCS began approaching its technical limit of substitution for sugar. The decline started in 1977 when HFCS and low-calorie sweetener use grew faster than the overall expansion in the sweetener market.

HFCS consumption averaged 21.6-percent annual growth during 1976-86, replacing sugar in soft drinks and some bakery and dairy products. Low-calorie sweetener use increased almost 13 percent annually during this period, also replacing sugar in some uses, especially soft drinks. Use of refined sugar in beverage production plummeted from 1.6 million short tons in 1982 to 0.2 million in 1988. (Glenn Zepp (202) 786-1883)

For further information, contact: Ben Huang, fruit; Shannon Hamm, vegetables; Peter Buzzanell, sweeteners; Verner Grise, tobacco; Doyle Johnson, tree nuts and greenhouse/nursery; David Harvey, aquaculture. All are at (202) 786-1883.



## **Commodity Spotlights**

### **U.S. Sheep Industry Stabilizing**

The number of domestic sheep has dropped from a high of 56 million head in 1942 to just under 11 million in 1989. Around 1980, however, the industry stabilized. Since then, the sheep inventory has exhibited cyclical fluctuations typical of most livestock industries. A shrinking group of people with a taste for lamb largely caused the decline. Growth in competing man-made fibers and shortages of skilled shepherds also contributed.

Contrary to popular opinion, lamb imports have not contributed to the decline in domestic production; imports and production have declined in tandem.

#### *Sheep Are Out West*

The sheep industry is concentrated in the arid and semi-arid areas of the 17 Western States, where raising sheep or cattle is often the only viable use of the land. Texas, with 18 percent of the inventory on January 1, 1989, is the largest sheep-producing State.

Arid land does not provide enough feed to bring lambs to slaughter weight quickly, so feeder lambs are shipped

## The Woolly Animal

Sheep were introduced to North America by the Spanish conquistadors in the 16th century. Most of the early breeds were derived from the Merino breeds of Spain and the Rambouillet breed of France, and were well suited to the dry climate of the American West. Later, the Suffolk, Hampshire, Corriedale, and Dorset breeds were introduced by the British.

Two production systems are used in the U.S.: small pasture flocks in the Midwest or East, and range production in the West. Production systems are further differentiated by the type of lambing practices: ewes giving birth unassisted in the open pasture or range (range lambing), or in sheds (shed lambing).

On Western ranges, sheep consume forage that would otherwise have no economic value. Much of the area is more suitable for sheep grazing than for cattle grazing, because sheep consume forbs and shrubs more readily than cattle do, require less frequent access to water, and have a greater ability to cross rough or steep terrain.

Small flocks are kept on many farms in the Midwest and East to consume forage that cannot be cultivated, eat crop residues that have feed value but cannot be

marketed, or consume harvested roughage for which there may not be a ready market.

Climate and choice of breed determine the importance of wool versus meat. Southwestern sheep produce a fine wool, while sheep in the Northwest produce both fine and coarse wools. Producers in the humid Midwest and East raise primarily meat-type sheep with a coarse wool.

When wool and meat were necessary for self-sufficiency in rural America, sheep production was heavily concentrated in the Midwest and East. As the need for self-sufficiency declined, sheep production moved westward and began a long, slow decline. Nonetheless, sheep are still raised in most of the U.S. except the Southeast, where disease and parasites limit production.

Sheep can reproduce faster than cattle, though much slower than hogs or poultry. Conception to slaughter takes about 12 months for sheep, compared with 30 months for cattle. Ewes can have twins or even triplets and may average about 1.4 lambs per year, while cows average less than 1 calf per year. It takes about 30 months for sheep producers to expand the herd, about half the time it takes cattle producers. (*Terry Crawford (202) 786-1285*)

from more arid areas to feedlots for finishing, much like feeder cattle. Slaughter facilities are usually placed near feedlots to cut shipping stress before slaughter.

Only about 5 percent of the breeding inventory was in Colorado on January 1, but about one-fourth of lambs on feed at the beginning of the year were there, making Colorado the largest sheep-feeding State.

The sheep industry has not attracted new producers. This is so even though sheep production has been profitable in twice as many years recently as cattle. According to ERS cost-of-production estimates, stock sheep were profitable for most of 1972-88, in part owing to a Federal wool subsidy. The wool payment accounts for about 17 percent of sheep operators' receipts.

Disease and predator problems translate into a higher death rate for sheep than for other livestock. Also, the shepherd's lonely existence makes it difficult to attract skilled labor. Moreover, sheep require twice the labor of cattle for the same enterprise base.

In response to these problems, producers have increased the average yield of sheep; genetic selection and feedlot finishing raised the average dressed weight of lambs from 51 pounds in 1970 to 63 in 1988. Producers can therefore cut the size of their breeding herd and maintain production.

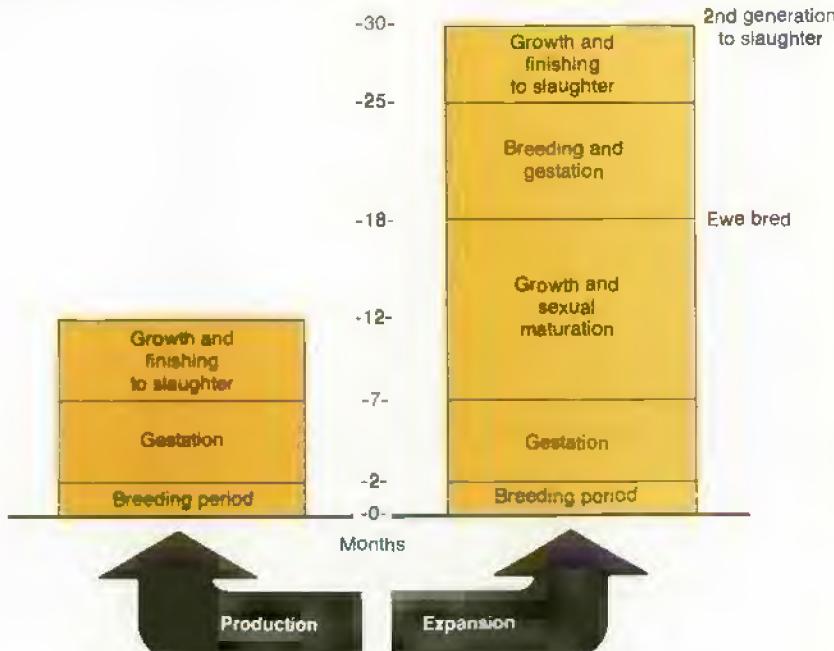
### Demand for Lamb and Mutton Is Small

Only a small segment of the population eats lamb or mutton. Lamb and mutton consumption is expected to be about 1.4 pounds per person in 1989, compared with beef at about 71 pounds, pork at 63, and broilers at 65.

The sheep industry has been trying to attract new customers through educational drives on how to purchase and prepare lamb. But it still faces the prospect of boosting consumption of a relatively expensive red meat at a time when all red meats are losing market share to poultry.

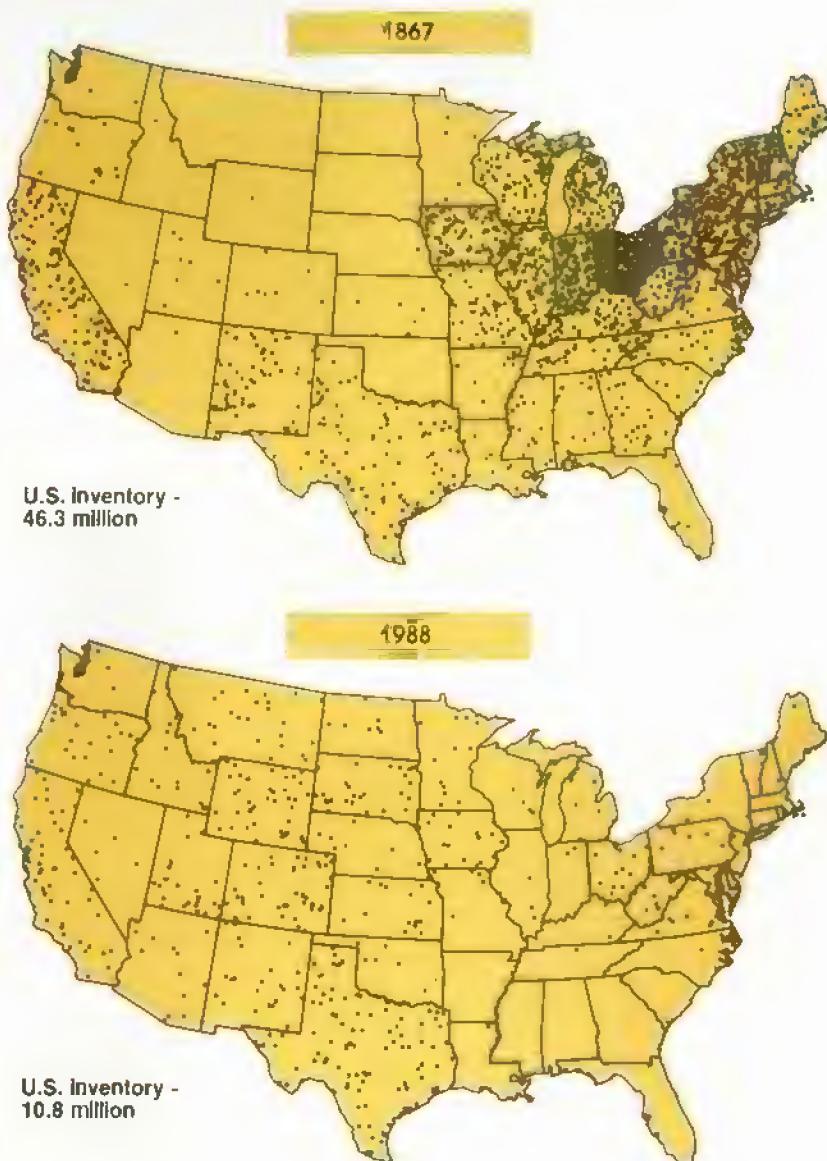
Exporting nations are providing some innovations. U.S. lamb imports have

Sheep Herd Expansion Takes 2½ Years



## Over the Years, the Sheep Inventory Has Declined and Gone West

1 dot = 20,000 head



shifted from ocean-going frozen products to airborne fresh lamb. Australia leads in fresh lamb sales to the U.S. New Zealand ships live lambs to Oregon. This year, 27,000 landed in May, and another shipment of about 27,000 is to follow. However, live-lamb imports are still small compared with annual domestic slaughter of about 5.3 million head.

Like most specialty industries, the sheep industry continues to be profitable. The downside to a small industry is that the efficiencies of a larger scale in slaughter

and distribution cannot be fully exploited, and both producers and consumers bear the brunt of the higher processing and distribution costs.

For the longer run, the U.S. sheep industry can expect fairly steady inventory and production. The post-1940's decline is not likely to be repeated. [Richard Stillman (202) 786-1285]

## U.S. Watermelon Industry Undergoes Revitalization

To break out of a decline, the U.S. watermelon industry is taking steps to revive demand by better targeting its product. Through 1980, U.S. production was trending downward and domestic utilization was in a tailspin.

Domestic watermelon production gradually fell from 29.3 million cwt in 1960 to 26.1 million in 1981—the last year USDA officially estimated production. With output falling and population growing, per capita use dropped by a third. Industry efforts to deal with the decline were not well coordinated.

Recent changes may have given renewed vigor to the industry. Statistics from several States that still report watermelon data show production gains of one-fourth since 1981. States with gains include important producers such as Florida, South Carolina, and Arizona.

Favorable grower prices have contributed to the gains. In addition, available State production data suggest that per capita utilization has increased one-fifth since the 1980 low. This increase can be explained by the overall trend toward more fresh produce in the diet, more imported watermelons, and the convenience of relatively new "icebox" and seedless melons, along with enhanced produce marketing in retail stores.

In response to sluggish demand, the industry began promoting watermelons through the nine State watermelon associations. This spring, the associations greatly enhanced their market development efforts by adopting a national research and promotion program.

### National Promotion Program Gets Underway

Title XVI of the 1985 Food Security Act authorized the Secretary of Agriculture to establish an orderly process for developing and underwriting a program of research and promotion to strengthen and expand the market for watermelons.

A referendum was held last February on a proposed Federal plan. Watermelon producers and handlers (representing 73

percent of the volume produced and handled by those voting in the referendum) gave the proposal a green light.

The research and promotion will be financed through an assessment of not more than 2 cents per cwt of watermelon sold for human consumption, paid by first handlers and producers who grow 5 or more acres of watermelons. Anyone who is both a grower and a first handler will pay assessments for each function.

Although growers and handlers not wishing to support the program can request a refund, the National Watermelon Association hopes the plan will raise \$1 million annually. The plan will be developed and administered by a 29-member National Watermelon Promotion Board.

The program's main goals will be assessing consumer attitudes toward watermelon and discovering ways to increase per capita use. The program does not include provisions for production controls and does not try to set quality standards.

#### *Consumers Want Quality And Convenience*

Unlike most other fresh fruits and melons, watermelon utilization had been declining steadily for many years. A private survey of 2,000 households in 1988 pointed to concerns about convenience and quality as possible reasons.

While 12 percent of the consumers responding to the survey listed water-

melon as one of their three favorite fruits for snacking, 27 percent listed watermelon as one of the five produce items that are least consistent in overall quality and value.

Because watermelons are cumbersome and lack consistent quality, more than half of those surveyed said they purchase watermelon only once a month or less when it is in season and available. While consumer interest in convenience has escalated, growers have been slow to shift production to smaller melons. Satisfactory yields have been difficult to achieve with smaller melons, prompting most growers to continue producing the better yielding, larger varieties.

Larger varieties tend to be sought by institutional buyers, while smaller varieties seem to be favored by retail consumers. To better serve the retail consumer, grocery stores have been cutting and wrapping the larger melons to provide smaller, more manageable units.

#### *The Future Depends on Grower Flexibility*

Switching to more popular hybrid varieties, including smaller and seedless watermelons, appears to be a key to market expansion. In addition, the industry must focus on consistent quality and watermelon's nutritional value.

The industry is responding to market signals by developing a strategy that will focus on nutrition, increased use of identification stickers, new point-of-purchase materials, and more creative packaging.  
*[Gary Lucier and Amy J. Allred (202) 786-1884]*

### **Watermelon Facts**

*The Packer's "Fresh Trends 1988"* survey indicated that consumers do not associate watermelon with good nutrition. However, in a study by the Center for Science in the Public Interest, titled "The Complete Eater's Guide and Nutrition Scoreboard," nutritionists ranked watermelon as one of the most nutritious fruits available. Watermelon was ranked higher than cantaloupe, papaya, oranges, grapefruit, bananas, and apples.

According to information supplied by the National Watermelon Association, one 1-inch by 10-inch slice (weighing 482 grams) supplies the following nutrients:

- 77 percent of the RDA (recommended daily allowance) for vitamin C,
- 35 percent of the RDA for pyridoxine (vitamin B6),
- 26 percent of the RDA for thiamine (B1),
- 18 percent of the RDA for vitamin A,
- 4-13 percent of the RDA for many other minerals and vitamins,
- 560 mg. of potassium,

- no cholesterol and little fat,
- little sodium (10 mg.), and
- few calories (152).

The 1982 Census of Agriculture showed 11,888 farms producing watermelons in the U.S. This was up 6 percent from the 1978 census, and contrasts with a decline in the number of farms producing vegetables. (Data from the 1987 Census of Agriculture have not yet been released.)

About 65 percent of U.S. production is concentrated in Florida, Texas, California, and Georgia. Florida is the leading producer, accounting for about 30 percent of U.S. output.

Watermelons provided more than \$120 million in grower cash receipts in 1987. There are no direct Federal subsidies to the industry. But indirect subsidies, such as farm credit guarantees and subsidized water from Federal irrigation projects, likely touch some melon growers.

According to the Food and Agriculture Organization, the U.S. is the world's fifth largest watermelon producer. Only China, Turkey, the Soviet Union, and Egypt produce more.



## Farm Finance

### Record Receipts and Expenses Forecast for 1989

Net farm income is expected to be \$47 to \$52 billion this year, up about 10 to 15 percent from last year, as crop production rebounds from last year's drought and meat production sets a new high.

Net farm income measures the value of goods and services produced annually by the farm sector, less costs. A large part of last year's \$2- to \$3-billion decline in net farm income can be attributed to the drought, which cut production. And this year's expected rise can be attributed to more planted acres and projected higher production.

Total expenses grew an estimated 7 percent last year, largely because of a \$6-billion increase in feed and purchased livestock costs. Expenses are expected to rise again this year, but by only 4 to 5 percent, near the likely inflation rate.

The expansion in planted acres is a primary factor behind the increase in expenses. Expenditures on inputs directly related to higher plantings—seed, fertilizer, pesticides, custom work, marketing, and storage—are all expected to increase by 10 percent or more. In addition, short-term interest expenses are projected to rise nearly 10 percent.

But these items account for only a fifth of total expenses, and moderate increases are forecast for other inputs, particularly feed and livestock purchases.

### Government Payments Down

Direct Government payments are forecast to decline 20 to 25 percent from last year and 35 percent from the 1987 peak. A large part of the projected decline is due to lower payments on the 1988/89 corn and sorghum crops. The lower expected payments reflect the relatively high prices at the end of 1988.

Strong wheat prices are also expected to keep payments low relative to the previous 2 years. But an additional 10 percent of each participant's deficiency payment for the 1989/90 crops was moved forward to this calendar year. And more 1988 drought relief payments were made in 1989 than expected.

### Net Cash Income Down

Net cash income is expected to fall about 5 to 15 percent from last year's record \$58 billion. Unlike net farm income, net cash income includes sales of commodities produced in previous years, but excludes a number of noncash items such as depreciation. So last year's drought helped push 1988 net cash income to a record high as stocks were sold at high

### Strong Gains in Crop Receipts

	1987	1988	1989 F
	Billion dollars		
Wheat	4.9	6.4	7.8
Corn	8.8	10.1	9.5-10.5
Soybeans	9.6	12.0	11.5-12.5
Cotton	4.0	4.7	4.5
Vegetables, fruits, nursery	23.5	25.7	27-28
Total	61.9	72.4	75-77

F = forecast. Total includes receipts for other food grains, feed grains, oil crops, and tobacco.

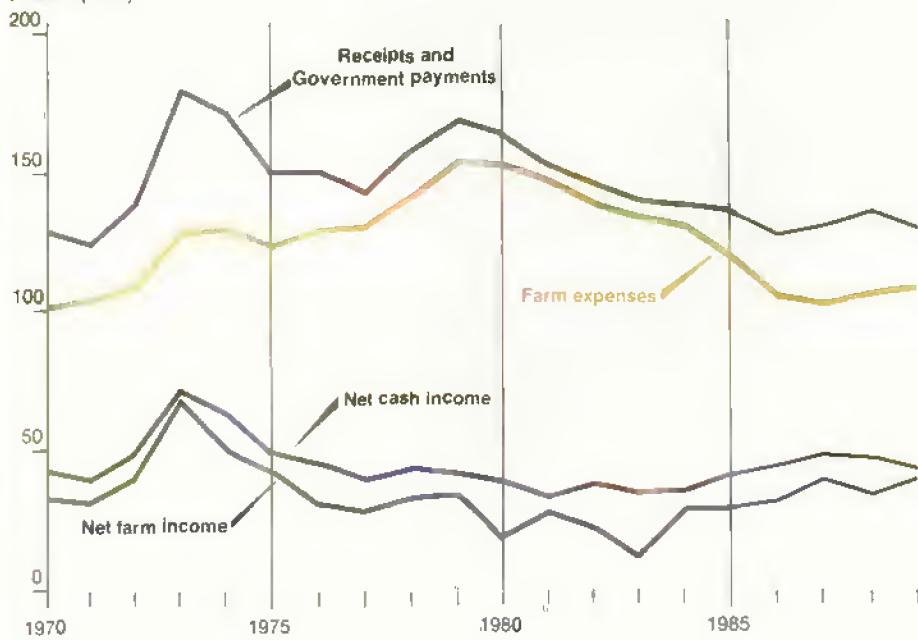
### Income Outlook: Record Receipts and Cash Expenses

	1987	1988	1989 F
	Billion dollars		
Receipts	138	150	156-163
Direct payments	17	14	10-12
Cash expenses	103	112	115-119
Net cash income	57	58	50-55

F = forecast. Receipts include other farm-related income such as custom work and machine hire.

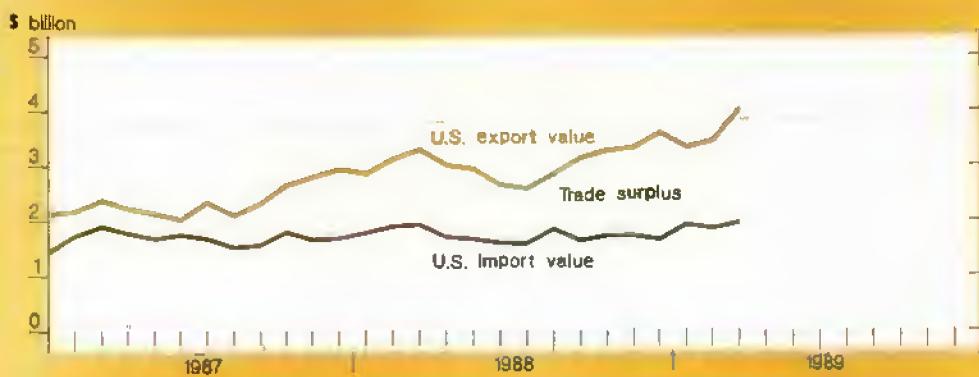
### Farm Expenses Up Following Long Decline

\$ billion (1982)

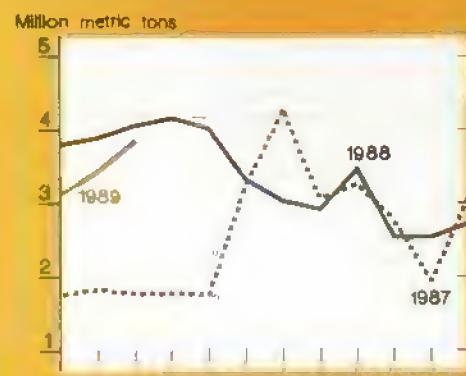


# U.S. Agricultural Trade Indicators

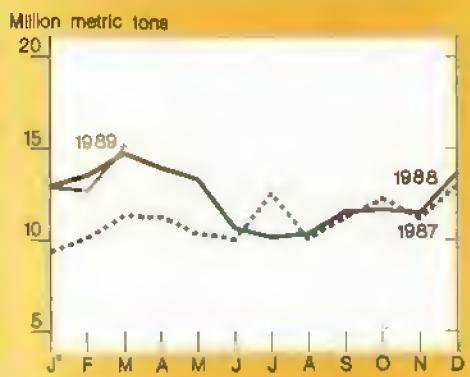
## U.S. agricultural trade balance



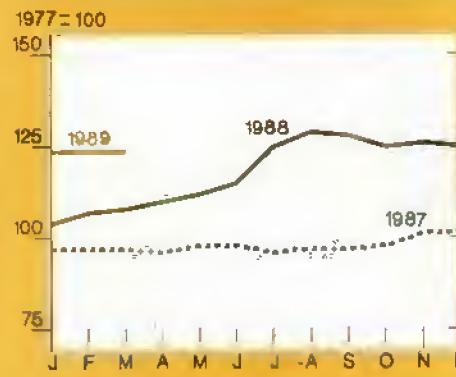
## U.S. wheat exports



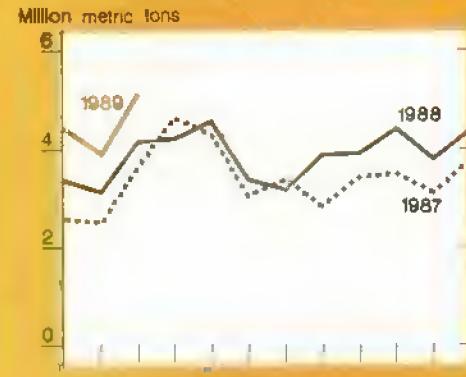
## Export volume



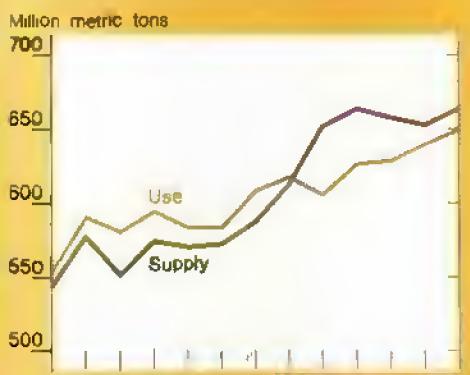
## Index of export prices



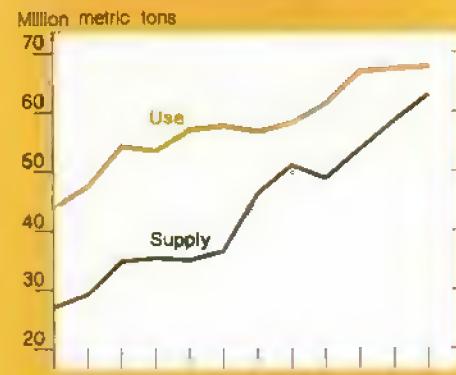
## U.S. corn exports



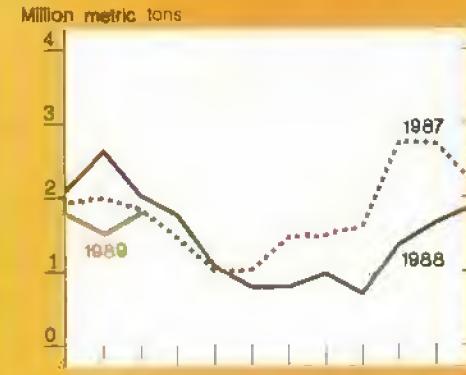
## Foreign supply & use of coarse grains



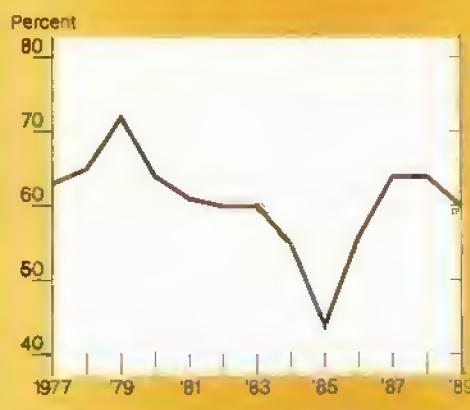
## Foreign supply & use of soybeans



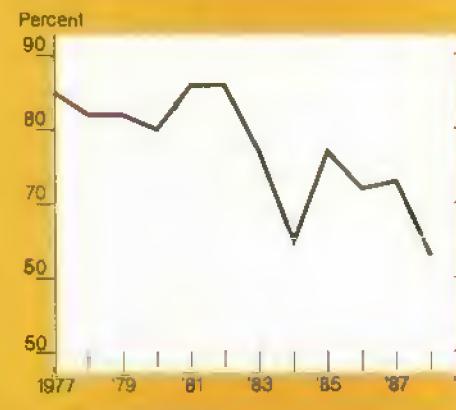
## U.S. soybean exports



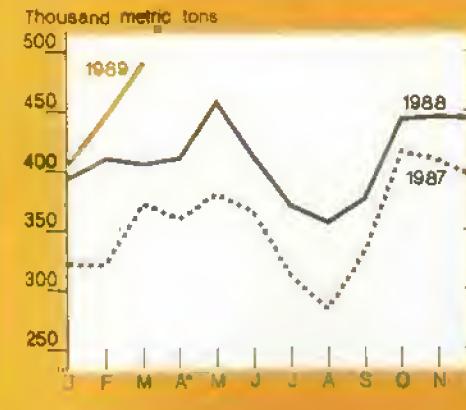
## U.S. share of world coarse grains exports<sup>1,2</sup>



## U.S. share of world soybean exports<sup>1,2</sup>



## U.S. fruit & vegetable exports<sup>3</sup>



<sup>1</sup>Excluding intra-EC trade. <sup>2</sup>October-September years.

<sup>3</sup>Includes fruit juices.

prices. This year's stock rebuilding will mean less net cash income.

Last year's estimated net cash income and this year's forecast net farm income are at record levels in nominal (current) dollars. Although neither sets a record in inflation-adjusted dollars, they are both high relative to recent years.

### Expenses Up

Inflation-adjusted expenses rose in 1988, following eight consecutive annual declines. Between 1979 and 1987, total real expenses declined by a third, while real cash receipts declined by a quarter.

Because real revenues and expenses were both falling throughout the period following 1979, net cash income and net farm income were relatively stable. The only major fluctuations occurred in 1980 (drought) and 1983 (Payment-In-Kind program and drought).

In 1984, the decline in real expenses accelerated, partly because of lower interest expenses resulting from a large decline in debt, as farmers began to work themselves out of the financial crisis. Lower expenses led to rising real net income, even though revenues were still declining.

The trend of declining inflation-adjusted expenses appears to have ended, with rising expenses estimated for 1988 and 1989. After 8 years of ever-higher expenses, followed by another 8 years of declines, constant-dollar expenses in 1987 were back near the 1971 level. The estimates for 1988 and 1989 may signal another period of growing expenses if input prices continue up.

### Revenues Uncertain in 1990

USDA forecasts for corn, soybeans, hogs, and several other commodities suggest lower prices this fall. So farmers' ability to maintain tight control over expense growth is even more important in light of uncertain revenues. If commodity prices continue downward in 1990, real gains in revenues will be less than in 1987-88. *[Andy Bernal (202) 786-1807]*

## A Look at Farm Income Fundamentals

U.S. agriculture has entered its third year of economic recovery. Since the start of 1987, farm incomes and finances have rebounded more strongly than anticipated. Net cash income is projected to average \$56 billion during 1987-89, about \$10 billion higher than the 1984-86 average, while debt fell more than 10 percent in 1987-88.

The more than 40-percent growth in exports since 1985/86 is another indication of the turnaround's strength. The 3.3-billion-bushel reduction in 1988/89 ending stocks of corn, wheat, and soybeans has improved the supply/demand relationship for farmers. Higher prices brought about by lower stocks and strong export demand likely will extend the financial recovery through the end of 1989 and into 1990.

But how solid is the recovery? U.S. agriculture began the 1980's with a bloated cost structure that was a precondition for the ensuing financial crisis. Will farmers avoid a repeat in the early and mid-1990's?

A continuing farm recovery will depend on many factors, ranging from currency exchange rates and multilateral trade negotiations to global weather patterns. These are beyond the control of individual farmers and are difficult to foresee. A focus on agriculture's economic and finance fundamentals can provide useful intelligence about what lies ahead for farmers during the next 1-3 years.

### Many Farm-Economy Fundamentals Are Stronger

Agriculture is now a growth industry. Among the factors responsible:

- **\$20-billion higher sales.**—Growth in commodity sales has been the engine of the recovery. Overall, crop prices have increased 23 percent and livestock prices 12 percent since 1986. Farm output volume in 1989 is forecast slightly higher than during 1986-88. Higher prices and more production translate into a more than 15-percent increase in farm receipts during the 1987-89 recovery.

- **Capital investment up one-third.**—Investment in new tractors, machinery, and buildings will be about \$3 billion higher in 1989 than in 1986.

- **Farm real estate values forecast up one-sixth since 1986.**—USDA forecasts that farmland values will increase at a rate slightly higher than inflation in 1989. Farm investors regained enough confidence to bid land up 20 percent in the Corn Belt during 1987-88.

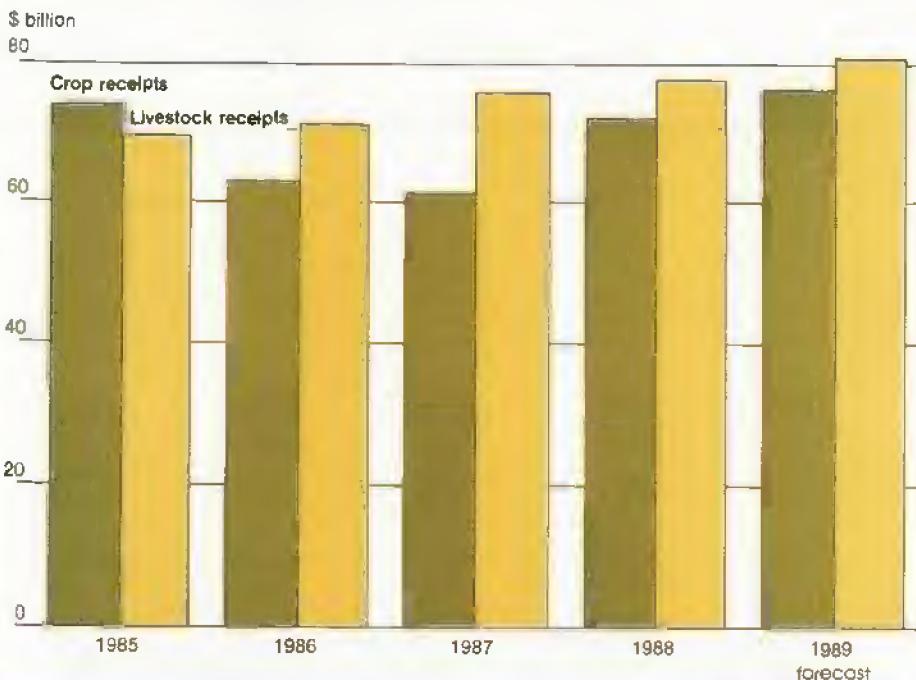
Reduced commodity supplies and growing demand undergird current sales strength and investment growth. Four long-term factors suggest that supply will not soon dwarf demand, and that farmers will not soon experience another deep financial crisis similar to that of the mid-1980's:

- **Conservation acreage increasing.**—The Conservation Reserve Program will idle 30 million or more acres a year through the mid-1990's (the goal is 40-45 million acres). This compares with an average of 23 million acres idled between 1979 and 1985. Additional acreage could be idled under the annual programs for feed grains, food grains, and cotton.

Instead of planting fencerow to fencerow (as was done in 1980-81, when no acres were idled under commodity programs), farmers will conserve and restore soil resources in the early 1990's. Idled acreage partially accounts for the lower wheat stocks in 1989.

- **Cheaper dollar spurs exports.**—The dollar's devaluation bodes well for strong U.S. farm exports. One dollar will buy about 40 percent less German and Japanese currency in 1987-89 than in 1984-85. This makes U.S. exports more competitive with European producers, and U.S. farm commodities cheaper for Japanese consumers. Given the continuing U.S. trade and budget deficits, it is not likely that the dollar will rebound for an extended period to mid-1980's levels.

## Growth in Livestock Receipts Led Recovery



### If 1989 Trends Continue, Cost/Price Squeeze Could Recur in Early 1990's

	1986	1987	1988	1989 F
Billion dollars				
Cash expenses	101	103	113	115-119
Capital expenditures	9	10	11	10-12
Dollars per bushel				
Corn price	1.93	1.55	2.37	1.65-2.05
Soybean price	4.95	5.07	7.03	4.75-6.25

F = forecast. 1986-88 crop prices are for the calendar year. 1989 crop price forecasts are for the crop year from September 1, 1989, to August 31, 1990.

- Stronger farm finances.**—Improved farm finances are a third factor that will have positive repercussions for several years. Between 1985 and 1988, the number of commercial producers with sales of at least \$40,000 who faced loan default declined by about 50 percent to 60,000.

Farm debt fell \$45 billion over 6 years in the mid-1980's. Farmers are now in a much stronger financial position than they were 5 years ago. This provides a cushion that will enable most farmers to withstand one or more years of reduced profits should agricultural growth slow or stall in the next few years.

- Farmers are survivors.**—The fourth factor is difficult to quantify. Today's farmers have survived a cost/price squeeze and the financial problems brought about by land-value deflation after debt tripled in the 1970's. They have survived all the business problems of a major crisis, and in the process have learned valuable lessons.

For example, the record net cash incomes during 1986-88 tended to be used conservatively to pay down debt and make needed investments and improvements.

While investments and land values have rebounded from 1986 lows, debt continued to fall through 1988, and is forecast to be stable in 1989. And 70 to 75 percent of this debt reduction reflects farmers paying off loans, not loan losses. Farmers likely will continue to avoid an over-investment trap.

There is heightened awareness of the long-term importance of daily cost control and sound management. This is an intangible factor that is as important as higher commodity prices, lower stocks, more competitive exchange rates, and less financial stress.

### Some Farm Fundamentals Slightly Weaker

Rising commodity sales, record-high net farm income, and rebounding land values present a consistent pattern of growth. However, in the dynamic agricultural market, business conditions can change rapidly. Several factors could eventually derail the recovery:

- Recurrence of a cost/price squeeze.**—Cash expenses are now increasing faster than inflation, mainly because of an increase in planted area and higher input prices. Total cash expenses in 1989 are forecast \$2-\$3 billion higher than the previous record. Given a return to normal production trends, corn prices are forecast to fall to \$2.00 per bushel or less by late this fall. The combination of higher costs and lower prices could lead to renewed financial problems for many farmers.
- Continued heavy reliance on Government payments.**—The forecast \$10-\$11 billion in direct payments to farmers during 1989 is larger than anticipated for the third year of a strong recovery in farm income and finances.
- Lower profits in livestock sectors.**—Stellar hog profits in 1986-87, followed by excellent cattle returns in 1987-88, led the farm recovery. No comparable profits appear likely to

lead the farm sector in 1989, although vegetable and broiler profit potential is very good.

- *Land cashflows could become less profitable.*—While the combination of land prices, interest rates, and cash returns remains much improved over 1984-85, fewer farmers than in 1987-89 will be able to use farm earnings alone to cover mortgage payments on Midwest row-crop land bought in 1990.

Lower forecast commodity prices and markedly higher land prices may be signaling a new stage in the recovery, one characterized more by stability than rapid growth. Also, farm loan repayment rates have recently become sluggish in Illinois, Iowa, and other States surveyed by the Federal Reserve Bank of Chicago.

- *Trade negotiations could lead to less Government price protection.*—A successful outcome from the current GATT negotiations likely would lead to a higher world market share for some U.S. farm products, but a loss of market share for others. Farmers would continue to face tough competition from producers in Australia, Argentina, Brazil, the EC, and elsewhere, with less price protection than is now available under the USDA system of target prices, loan rates, and idled acreage.

The competitive rigors of a level playing field offer substantial long-term rewards, but transitional problems could ensue for high-cost producers or producers who lack the financial stability to weather short-term periods of low prices.

- *Continued productivity gains.*—Increasing supplies may cause price pressures in the early 1990's. The combination of a few large advances in research fields (such as biotechnology) and numerous small gains in production practices and genetic research (such as improved hybrid

seed) will continue to improve yields and feed-use efficiency rates. The chronic excess supply problem that dominated agricultural debates in the 1950's and 1960's may return to haunt farmers.

### *There Are Risks to A Growth Outlook*

Several factors portend continued growth in agriculture, but other factors raise concerns about farmers' profits in the early 1990's.

In mid-1989, the export-to-stocks ratio, input costs-to-product prices ratio, and land values-to-cashflow ratio are in much better balance than in 1984-86. And the financial position of more than 9 out of 10 commercial farmers is sound. Moreover, farmers continue to diversify by increasing off-farm income.

The bottom line is that even if commodity prices weaken this year following last year's drought-induced higher prices, farm finances and many of the fundamentals are likely to remain strong through 1990. In the meantime, farmers will be watching for signs that declining commodity prices could cool off the remarkable growth that has characterized the farm sector since 1986. [Greg Hanson (202) 786-1807]

### **Debt Financing Boosts Flexibility, Vulnerability**

Farmers' financial condition is on the rebound after the worst squeeze since the Great Depression. This financial turmoil raises questions about how much credit farmers should use—and has prompted much research on credit issues. This article presents some research results that shed light on some of the relationships between farm production, costs, and credit use.

The bottom line is that credit helps farmers to be more flexible in responding to price changes, but farmers know that credit must be used prudently to limit the odds of bankruptcy should an unexpected downturn occur.

Decisions to change farm output rely on a complex interaction of factors too numerous to control for, and so the

results here should be taken for illustrative purposes. Among other factors, weather, farm programs, and technological change were allowed to vary in the study as they actually did during the period. All of the work was done in real terms, adjusted for inflation.

### *Credit Allows Quick Response*

An ERS model of trends in farm output, production costs, debt, and equity during 1970-88 shows that credit allows farmers to respond more quickly to changes in market signals and to expectations of future profits.

But farmers who use credit to expand during periods of optimism are more vulnerable during unexpected downturns. Farmers' losses during the early and mid-1980's illustrate this vulnerability.

Farmers' unprecedented use of credit during the 1970's farm boom allowed them to capture more profits from the high prices of the time. Research shows that farm output would have lagged by an average 7.2 percent annually during the 1970's had farmers not used credit to finance the expansion.

By borrowing, farmers are able to buy more land, equipment, fertilizer, and other inputs to expand production quickly. If they do not use credit and price prospects look good, it may take years to accumulate enough savings to buy the inputs to expand. The delay means forgone profits.

### *Debt Financing Grew In the 1970's*

As people became concerned about a world food crisis in the 1970's and food demand grew, farm commodity prices rose and production responded. To finance the expansion, farmers took on more debt. Farm non-real-estate loans, a proxy for farm production credit, increased at an annual average rate of 7 percent during the 1970's. That's compared with a 4-percent annual increase during 1948-70.

In 1979, when farm production debt peaked, farmers' interest expenses accounted for nearly 15 percent of total farm production expenses.

## What If Farmers Did Not Use Credit?

Using an ERS model, farm production costs are allocated between two funding sources, credit and equity (i.e., accumulated savings), to build two hypothetical farm output series for 1970-88. The credit series shows what would have happened to farm output if only credit had been used to finance output growth. Actual credit levels were used to construct the series.

The hypothetical series show that credit use accounted for the lion's share of the rise and fall in farm production. During 1970-79, changes in farmers' debt loads accounted for 82 percent of the growth in output.

Yet the change in credit during 1987-88 would have supported less output than was actually produced. This suggests that recent production growth was being financed more out of savings. Farmers appear to be more cautious about increasing their leverage to expand than they were in the 1970's.

During 1970-79, changes in farmers' equity accounted for 18 percent of the growth in output. In the equity-varying output series, when credit financing was

held at its 1970 level and hypothetical output grew only in response to changes in farmers' equity, both the rapid growth of the 1970's and contraction of the early 1980's were sharply damped.

For 1970-84, the results suggest that farmers did not much vary their use of savings to respond to changes in farm prices. The dip in 1983 output was due primarily to the drought and the Payment-In-Kind program. *[Hyunok Lee (202) 786-1459 and Gregory Gajewski (202) 786-3313]*

## Upcoming Economic Reports

### Summary Released      Title

#### July

- |    |                                   |
|----|-----------------------------------|
| 12 | World Ag. Supply & Demand         |
| 13 | Livestock & Poultry               |
| 14 | Pacific Rim                       |
| 17 | China                             |
| 19 | Dairy                             |
| 20 | Agricultural Outlook              |
| 21 | Rice Yearbook                     |
|    | Livestock & Poultry Update        |
| 25 | Foreign Agricultural Trade Update |
| 27 | Oil Crops Yearbook                |
| 28 | National Food Review              |



## Food & Marketing

### Drought Likely To Affect Egg Prices for 2 Years

Last summer's drought may keep egg prices elevated through the early months of 1990, according to a statistical model of corn-egg price relationships. Corn prices rose nearly 50 percent early last summer, primarily because of the drought, so poultry feed costs increased sharply. Higher feed costs pushed up egg production costs, cut production, and boosted egg prices.

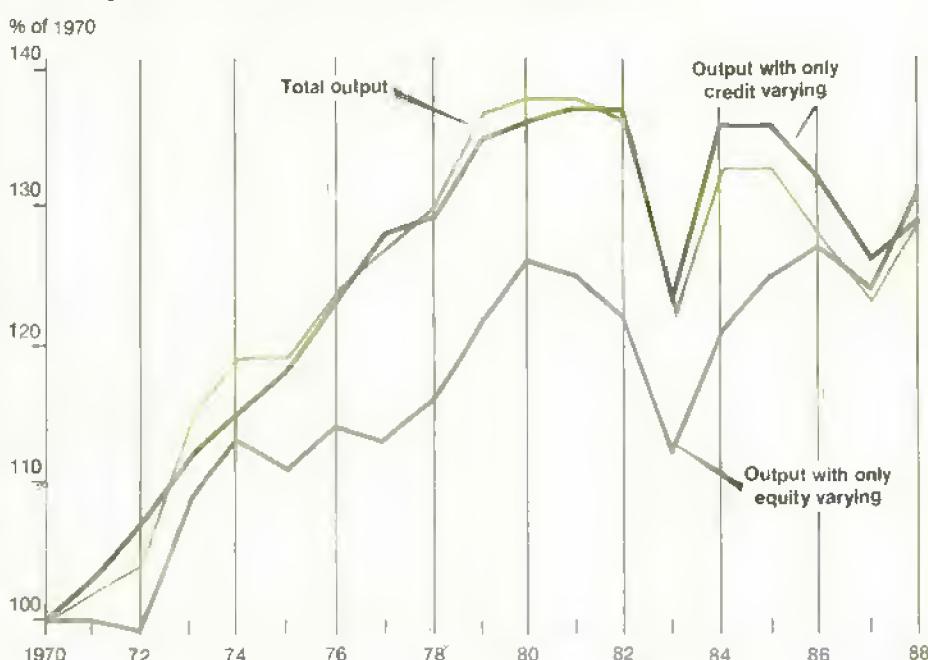
Using last summer's corn price increase, the model forecast cumulative egg price increases that closely matched the actual increases from June 1988 through March 1989. The matching adds credence to the model's suggestion of continued upward pressure on egg prices in the wake of the drought. Not all of the egg price increases have been drought-related, though. For example, producers had already cut the laying flock early last summer, also increasing egg prices.

Nonetheless, the model captures the relationships between changes in corn prices and changes in both farm and retail egg prices. Using 15 years of monthly, seasonally adjusted price data, the model incorporates the price responses to the 1974, 1980, and 1983 droughts.

### Egg Prices Were Expected To Rise . . .

In 1988, seasonally adjusted corn prices rose 49.3 percent between May and July.

## Borrowing Accounts for Lion's Share of Farm Output Variation



## About the Model

Historical egg price movements were summarized using a statistical technique. A vector autoregression (VAR) model was estimated, describing the relationships of corn's farm price to its own past levels, as well as to past levels of farm egg and retail egg prices. The model summarizes how the three prices have moved together on a monthly basis for the past 15 years.

The VAR model was shocked with a one-time corn price increase to see what would happen to egg prices. A 49.3-percent shock was used because it approximates the corn price increase that occurred during the early part of the 1988 drought.

While the procedure assumes that only corn price changes affect egg prices, the simplification is useful when corn prices rise so much in such a short time. The Producer Price Indexes for corn and farm egg prices and the Consumer Price Index for retail egg prices were used to construct the model. All of the price data, actual or predicted, are seasonally adjusted.

With a corn price shock of this magnitude, farm-level egg prices, given the historical trends, would have risen 9 percent for the first month, and then continued to increase at smaller rates for about half a year.

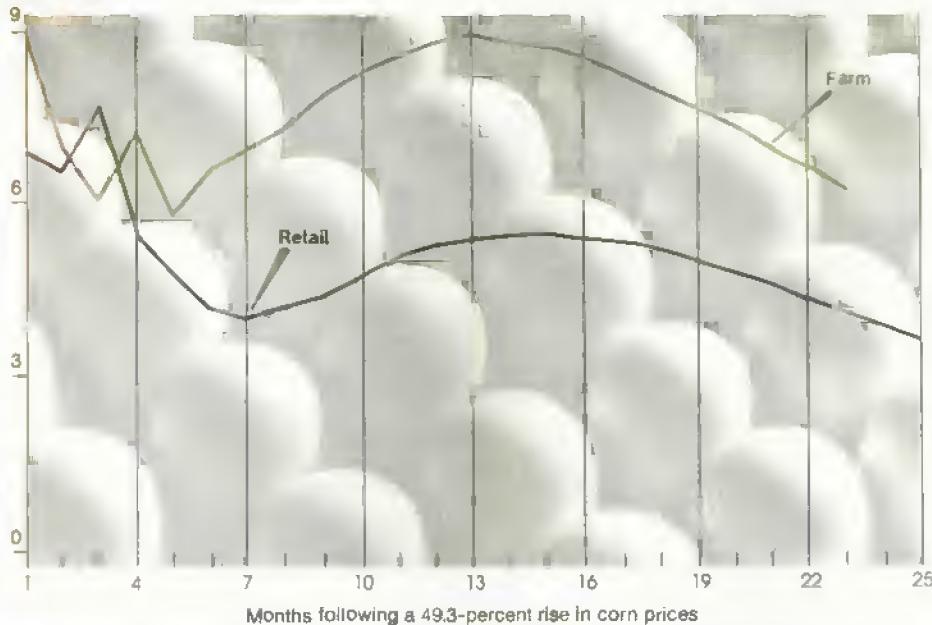
After that, history suggests that monthly farm egg price increases would accelerate to another peak of almost 9 percent at approximately the 1-year point, before beginning to wind down. The total effect of the initial corn price increase on farm egg prices would last for about 2 years.

Last summer's corn price increase was not expected to influence retail egg prices as much as farm egg prices. The retail price includes more transportation, packaging, and marketing costs than farm prices. Poultry feed costs are a smaller component of retail egg prices.

Nonetheless, the model's historical trends suggest that substantially elevated retail egg prices would follow last summer's corn price rise, and these egg price increases would be expected to peak at 7.7 percent in the third month.

## Corn Price Increase Sets Off 2-Year Ripple In Egg Prices

Percent change in price index



Farm and Retail Egg Price Indexes, Seasonally Adjusted (1982-84 = 100)

Month:	Farm price level	Percent change from prior month	Retail price level	Percent change from prior month
May 1988	78.2	—	88.4	—
June 1988	88.0	12.5	92.3	4.4
July 1988	98.3	11.7	99.2	7.5
August 1988	108.6	10.5	106.7	7.6
September 1988	98.7	-9.1	99.8	-6.5
October 1988	103.9	5.3	101.1	1.3
November 1988	92.1	-9.4	95.9	-5.1
December 1988	93.7	-0.4	94.0	-2.0
January 1989	112.5	20.1	107.1	13.9
February 1989	95.6	-15.0	103.5	-3.4
March 1989	132.7	38.8	122.5	18.4

Source: Bureau of Labor Statistics.

So 3 months would be required for the corn price shock to reach the retail level with full force.

Retail price rises then would taper down through the eighth month following the corn price rise. After the eighth month, the model's historical dynamics suggest, retail egg prices would increase for about another year.

### ... And They Did

Actual egg prices from last May through this March behaved much as the model suggested, although with more fits and starts than the model's month-to-month patterns. Retail egg price increases were smaller than the farm egg price increases, as the model suggested. See the accompanying table for the actual

changes in egg prices, and the accompanying graph for the changes suggested by the model.

March 1989 farm egg prices were 50.8 percent above June 1988 prices, compared with the 51.9-percent increase forecast by the model. Retail egg prices in March were 32.7 percent above June 1988, compared with the predicted 34.7-percent increase.

Given the model's accuracy in characterizing the 1988 drought and its aftermath so far, the continuing price impact that the model suggests seems likely to materialize. So the upward pressure on egg prices may persist through early 1990. Again, in addition to the drought, other factors (such as laying flock reductions) are at work pushing up egg prices.

[Ronald A. Babula (202) 786-1785 and David A. Bessler (409) 845-3096]



## Agricultural Policy

### Agriculture and The 101st Congress

The 101st Congress, elected last fall, is showing interest in the following farm issues: providing drought relief to farmers in areas affected this year; reducing expenditures to meet budget guidelines; passing a 1990 farm bill; and setting U.S. farm policy to match agreements achieved during the Uruguay Round of the GATT negotiations.

#### Drought Aid May Be Continued

Last year, Congress passed the Disaster Assistance Act to help farmers hurt by the drought or other natural disasters. The law was geared toward disasters occurring in 1988, and did not provide for subsequent disasters.

While most of the country has recovered from last year's drought, the western Corn Belt and some Plains States continued to be affected through May. Senators and representatives have introduced several bills to provide assistance for 1989, especially for hard-hit winter wheat farmers. Most of the legislation has called for a continuation of the 1988 aid for 1989.

#### Work Proceeding on the Budget And the Next Farm Bill

The Senate and the House approved a conference agreement on the fiscal 1990

## The 101st Congress

### House Committee on Agriculture

#### Democrats

de la Garza, E. (Kika) (TX)  
Chairman  
Jones, Walter (NC)  
Brown, Jr., George (CA)  
Rose, Charlie (NC)  
English, Glenn (OK)  
Panetta, Leon (CA)  
Huckaby, Jerry (LA)  
Glickman, Dan (KS)  
Stenholm, Charles (TX)  
Volkmer, Harold (MO)  
Hatcher, Charles (GA)  
Tallon, Robin (SC)  
Staggers, Jr., Harold (WV)  
Olin, Jim (VA)  
Penny, Timothy (MN)  
Stallings, Richard (ID)  
Nagle, David (IA)  
Jontz, Jim (IN)  
Johnson, Timothy P. (SD)  
Harris, Claude (AL)  
Campbell, Ben Nighthorse (CO)  
Espy, Mike (MS)  
Sarpanius, Bill (TX)\*  
Dyson, Roy (MD)\*  
Lancaster, H. Martin (NC)  
Long, Jill (IN)\*  
Vacant

#### Republicans

Madigan, Edward (IL)  
Ranking member  
Coleman, E. Thomas (MO)  
Marlence, Ron (MT)  
Hopkins, Larry (KY)  
Stangeland, Arlan (MN)  
Roberts, Pat (KS)  
Emerson, Bill (MO)  
Morrison, Sid (WA)  
Gunderson, Steve (WI)  
Lewis, Tom (FL)  
Smith, Robert F. (OR)  
Combest, Larry (TX)  
Schuette, Bill (MI)  
Grandy, Fred (IA)  
Herger, Wally (CA)  
Holloway, Clyde (LA)  
Walsh, James (NY)\*  
Grant, Bill (FL)\*

### Senate Committee on Agriculture, Nutrition, and Forestry

#### Democrats

Leahy, Patrick (VT)  
Chairman  
Pryor, David (AR)  
Boren, David (OK)  
Heflin, Howell (AL)  
Harkin, Tom (IA)  
Conrad, Kent (ND)  
Fowler, Wyche (GA)  
Daschle, Tom (SD)  
Baucus, Max (MT)\*  
Keetley, J. Robert (NE)\*

#### Republicans

Lugar, Richard (IN)  
Ranking member  
Dole, Bob (KS)  
Helms, Jesse (NC)  
Cochran, Thad (MS)  
Boschwitz, Rudy (MN)  
McConnell, Mitch (KY)  
Bond, Christopher (Kit) (MO)  
Wilson, Pete (CA)  
Gorton, Slade (WA)\*

\*New members of the committee.

budget resolution in mid-May. The agreement, which makes nonbinding recommendations for Federal spending, included \$42.2 billion for agriculture, representing a \$1-billion cut in agricultural programs. The agriculture committees will decide where the cuts will be made.

Most of the other issues facing agriculture will be addressed in the new farm bill expected in 1990. Most of the current law's provisions will expire at the end of calendar 1990, or the end of the 1990/91 marketing year. If no action were taken, farm programs would revert to permanent legislation under the Agricultural Adjustment Act of 1933 and the Agricultural Act of 1949.

Congress has already started hearings which may lead to a new farm bill. The issues have included cutting farm-program costs, planting flexibility, trade liberalization, food safety, environmental concerns, rural development, nutrition and hunger, and research.

#### *Farm Program Outlook*

The Administration and many legislators have expressed satisfaction with the 1985 farm bill. Although program costs have been high, direct Federal spending for farm programs declined from about \$26 billion in 1986 to \$12 billion in 1988.

Strong pressure to cut domestic spending, however, will continue to force lawmakers to scrutinize farm program costs. Cost-cutting proposals have included further reductions in target prices, setting target prices to reflect the costs of production, and establishing more flexible acreage bases.

The "triple-base" concept, which many believe would increase flexibility in farm programs, is popular in Congress. Introduced in 1985 by Rep. Charles Stenholm (D-TX), the program would continue to divide a producer's total base into permitted base and acreage idled under the Acreage Reduction Program. Permitted base would be further divided into base for program crops that would continue to receive program payments, and flexible base.

Crops produced on flexible base would not be eligible for deficiency payments. The ratio of permitted base to flexible



base, as well as any limitations on what could be planted on flexible base, would be determined by law or by the Secretary.

Proponents hope the triple base concept would decrease Federal expenses by cutting the number of acres receiving payments, while giving farmers more flexibility as to what they can plant. And the triple base would continue the movement toward a more market-oriented agriculture.

#### *Agricultural Trade Is a Key Issue*

Many in Congress and the Administration believe that the improving U.S. agricultural trade balance is due primarily to the 1985 farm bill. Congressional observers expect the new farm bill to continue boosting U.S. farm exports with targeted subsidies and to keep the pressure on other nations for trade reforms.

Should the Uruguay Round be successful in reducing trade distortions, any new farm bill with aggressive trade policies would need to be amended to reflect the agreement. Such action would take place after the GATT negotiations are completed.

#### *Food and Environmental Safety Becoming More Important*

Recent publicity about food safety will probably be reflected in the new farm bill, as well as in individual laws addressing specific health and safety issues. Recent concern about the effects of Alar has highlighted food safety issues.

The new farm bill may include some provisions on the use of chemicals in food production. However, environmental concerns may translate mainly into more pressure to amend the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA). FIFRA was amended last year, but many lawmakers are pushing for even stronger restrictions.

Other pending food safety legislation includes establishing a seafood inspection program similar to those for meat and poultry, and improving food labeling to disclose the cholesterol, sodium, fat, and calorie content of foods.

Groundwater contamination continues to be an important issue. In the 101st Congress, numerous groundwater bills have already been introduced.

In response to concerns about groundwater contamination and chemical use, the idea of low-input or alternative agricul-

ture has become more popular. A bill was introduced by Sen. Wyche Fowler (D-GA) to promote low-input sustainable agriculture (LISA). This bill would use cash incentives and tax breaks to encourage farmers to voluntarily review farm chemical use, and to cut back where possible.

#### Rural Development More Popular

Many of the bills introduced have concentrated on improving rural health services. Since May, numerous other bills have been introduced to improve rural education, transportation, and water distribution.

There have been several proposals aimed at diversifying the economies of rural communities and promoting rural businesses. A comprehensive bill, introduced by Senator Patrick Leahy (D-VT), consists of loan and grant programs that call for cooperation among Federal,

State, and local governments, along with the private sector.

The bill has passed the Senate's Agriculture Committee and will likely be brought to the floor of the Senate early this month. The Senate has established a rural development task force to get legislation through the many committees that have jurisdiction over rural development issues.

#### Risk Management May Be Reformed

Secretary Yeutter has told Congress that the present crop insurance program needs to be reformed. Participation has been very low; in 1988 and perhaps again this year, Congress has come to the aid of all farmers in disaster-afflicted areas, not just insured producers.

The Administration feels that drought-relief legislation forces the taxpayer to subsidize those farmers who choose not to purchase crop insurance. Also, by continuously providing disaster relief measures, the Government discourages farmers from purchasing crop insurance.

The Secretary also encourages farmers to use the futures and options markets to protect their returns.

#### Sugar, Nutrition, and Research Also Big

Sugar quotas continue to be debated, especially by urban legislators. Sen. Bill Bradley (D-NJ), along with Rep. Thomas Downey (D-NY), reintroduced legislation to increase quotas. The renewed Caribbean Basin Initiative, which has already passed the House, includes a provision to freeze the Caribbean share of the sugar quota at its current level.

Nutrition issues receiving attention this year focus on improving nutritional monitoring, including the dietary and nutritional status of the American population, and supporting nutritional research.

Congress is looking into boosting support for research on nontraditional ways to increase the use of farm products. The research legislation focuses on making biodegradable plastics and using ethanol.  
*[Susan L. Pollack (202) 786-1696]*

#### Upcoming Releases from the Agricultural Statistics Board

The following list gives the release dates of the major Agricultural Statistics Board reports that will be issued by the time the August *Agricultural Outlook* comes off press.

#### July

- 5 Farm Production Expenditures  
1988-Preliminary
- Egg Products
- 6 Dairy Products
- Poultry Slaughter
- 7 Celery
- 10 Noncitrus Fruits and Nuts
- Midyear Supplement
- 12 Crop Production
- 13 Turkey Hatchery
- 14 Milk Production
- 18 Vegetables
- 20 Mink
- Catfish
- 21 Cattle on Feed
- Livestock Slaughter
- Cold Storage
- 25 Eggs, Chickens and Turkeys
- 28 Peanut Stocks and Processing
- Cattle
- 31 Agricultural Prices
- Catfish Production

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## Special Articles

### Hope for the Sahel?

Sub-Saharan Africa is the only region in the world where, for the last 20 years, population growth has outpaced increases in food production. The Sahel region of West Africa has registered particularly poor agricultural performance.

The Sahel covers over 2 million square miles (about two-thirds the size of the continental U.S.) and includes eight countries: Senegal, Gambia, Mauritania, Mali, Burkina Faso, Niger, Chad, and Cape Verde. Only about 4 percent of the Sahel is arable; the balance is desert (59 percent), permanent pasture (26 percent), and woodlands (11 percent).

Much of the Sahel is locked in a vicious cycle of increasing cultivation and grazing that pushes down productivity. This dynamic is driven by rapid changes in population and socio-economic relationships, slow technological advances, poor input delivery and support systems, and government policies.

The results are self-reinforcing declines in rural incomes, food consumption, and quality of life, together with long-term resource degradation. The people have become dependent on outside sources for much of their food, and the prospects for economic growth are bleak unless major changes take place.

Development efforts for the Sahel have been tried without great success, owing largely to the poor soil, low rainfall, and high temperatures. However, better on-farm soil and

water management practices can significantly increase food production, boost farm income, and cut soil erosion in the Sahel.

Rising farm incomes would ripple through the urban areas as farmers increased their demand for nonfarm goods, and result in a multiple increase in the region's income. This in turn would allow the region to become a more effective participant in world commercial trade, and a ready market for a wide range of U.S. exports.

### *Agriculture Is Key, But Yields Are Slipping*

Agriculture is the predominant activity in the Sahel, generating as much as 70 percent of GNP in some countries, employing 75-90 percent of the labor force, and producing a substantial portion of the region's foreign exchange. With average annual per capita income about \$300 and a life expectancy of 44 years, the region's countries are among the poorest in the world.

Compounding the problems, if the Sahel's population of 38 million keeps growing at its annual average rate of 2.8 percent, it will double in about 25 years.

The land's carrying capacity—its ability to provide food and fiber for humans and animals without losing long-term productivity—has already been exceeded. With current farming technologies and population trends, the population will exceed the land's carrying capacity by about 30 million people by the year 2000.

So the Sahel is slowly losing the ability to feed itself. Per capita food production declined about 1.6 percent per year during 1962-88. Moreover, food output is highly variable from year to year.

Gains in food production have come primarily from expanding cropped area. But increased cultivation of marginal lands, together with more intensive use of traditional farm plots, has pushed down average food-crop yields over the past 20 years. Land degradation has reduced productivity on both marginal lands and traditional homesteads, turning the land into desert. The degradation process is called "desertification."

Steadily extending the farmed area in order to increase food production cannot continue because arable land is limited. Short-run production increases are not keeping up with population growth, and are occurring at the expense of long-run soil fertility.

### *Dependence on Other Countries Trending Up*

Most countries in the Sahel rely on substantial food imports and food aid; the combined share of imports and food aid in total food supplies has been trending up since 1970, reaching 30 percent in 1984 and 23 percent in 1985. Even during

1986 and 1987, when weather was better and domestic production was up, imports and food aid made up about 20 percent of the region's food supply.

Depending on imports means relying on volatile international grain markets. For example, world prices for rice and corn were 30 to

45 percent higher in marketing year 1987/88 than in 1986/87. For poor Sahelian countries forced to import food, this rapidly uses up scarce foreign exchange and may increase their national debt.

Moreover, while imports and food aid help meet food needs in the short run, such relief may be a partial cause of stagnant agriculture. Increasing food aid and imports of preferred grains, such as wheat and rice, may stifle demand for locally produced grains.

#### **Poor Soil, Low Rainfall, Hot Temperatures Hamper Farming**

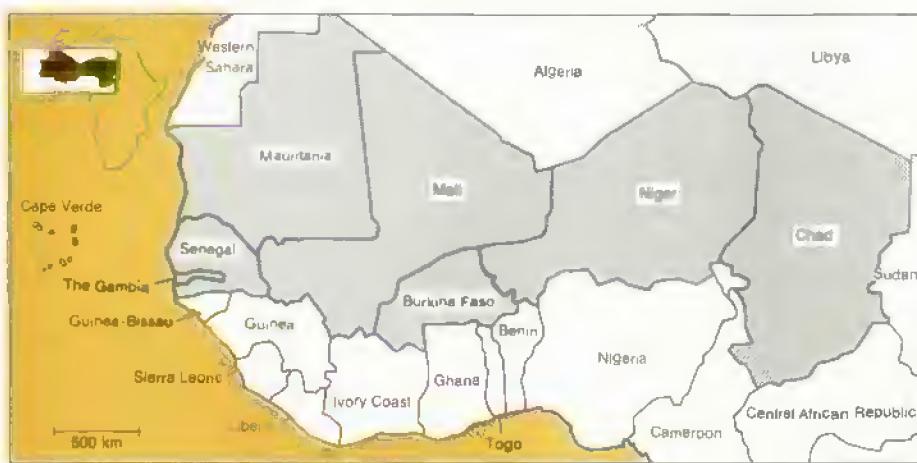
Sahelian soil fertility is generally low. Many soils are extremely weathered from exposure to high temperatures, intense leaching, and erosion. Crusting and compaction make sandy-clay soils difficult to cultivate. Wind and water erosion may be as high as 50 tons of topsoil per acre per year.

Rainfall is probably the single most important factor in the success or failure of farming in the Sahel. But 85 percent of the region receives less than 24 inches per year. Rainfall is also highly unpredictable and droughts are common. The well known droughts of 1968-73 and 1983-85 represent only two in a long history of below-normal rains. Even the relatively better rains of 1986-87 were below the long-term average. Annual rainfall has been trending down since 1950.

The Sahel normally has a summer wet season followed by a prolonged dry season. Growing seasons typically begin in June and July. But rainy-season onset can vary by 2 months. If the rainy season arrives too late or ends too early, the growing season may be too short for a normal crop.

Temperatures are high year round, with peaks of 110-120 degrees during the spring and early summer, so potential crop water use exceeds rainfall much of the time. Poor soil water infiltration and soil water-holding capacity exacerbate the unfavorable crop-water situation.

Principal Countries of the Sahel



Large-scale irrigation has performed poorly in the Sahel and offers little hope for the region, at least in the near future. The reasons include high investment and maintenance costs, the management-intensive crop production packages that accompany irrigation, difficulties with variable river flows, inadequate input-delivery systems, and lack of a marketing infrastructure.

Most analysts agree that large-scale irrigation will remain costly in the Sahel, and will spread only slowly over the next 40 to 50 years.

#### **Socioeconomic Problems Limit Farmers' Use of New Technology**

Decisions on crops and technologies depend on farmers' resources and goals. In the Sahel, farmers'

ability and willingness to adopt new management practices are influenced by the following factors:

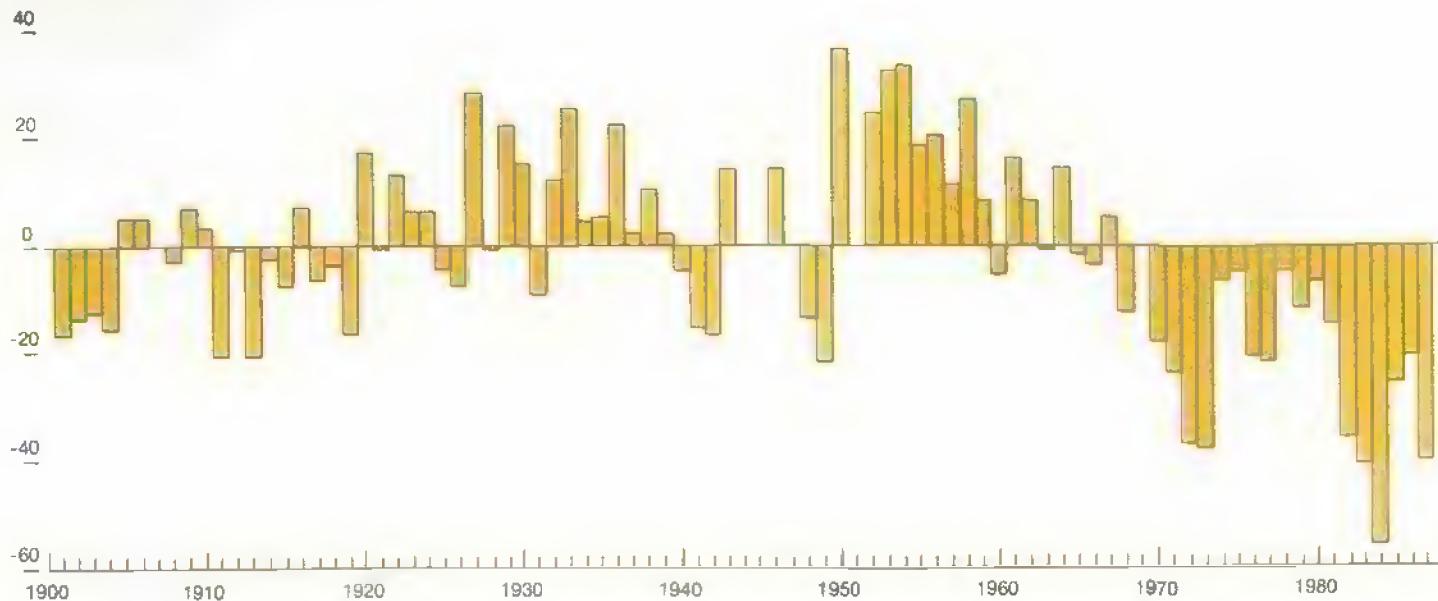
- *Farmers prefer single technologies.*—The complex Sahelian environment means that single technologies will address only part of the problem. However, simultaneous mastery of several approaches is difficult, takes time, and at first may lower yields. Farmers cannot absorb such shortfalls.
- *Farmers are risk averse.*—Farmers operating at the edge of survival in such a risky environment cannot make mistakes. Safe and time-tested production and marketing strategies with low output are locked in.
- *Farmers need high returns to labor.*—Sahelian farmers need improved on-farm soil and water management practices the most. However, new technologies often increase demands on the limited labor supply. Historically low crop yields and prices have reduced farmers' ability to pay wages high enough to attract adequate labor.
- *Farmers need credit.*—Credit institutions are reluctant to lend to farmers with little capital and highly variable income prospects. The result is a credit vacuum.

#### **Marketing Systems Weak**

The Sahel's weak and inefficient marketing systems have cut farmers' incentives to adopt needed soil and water conservation practices.

## Sahel's Rainfall Has Been Declining Since 1950

Percent departure from long-term average



In the past, government organizations largely controlled formal marketing of major agricultural commodities and purchased inputs. While this has helped promote better technologies for certain cash crops (e.g., cotton, peanuts, and cocoa), the overall result has not met expectations.

The result has been low producer prices inhibiting farm production and investments; low public investment in physical infrastructure, such as feeder roads, communications, and storage and processing facilities; and inadequate input delivery and equipment maintenance services. Subsidized government distribution of some inputs has hampered the development of private input-supply and service sectors.

More recently, Sahelian governments have been moving away from marketing controls and are beginning to rely more on the free market. But the legacy of poor infrastructure remains, hindering market development. Moreover, farmers' inability to consistently produce a surplus and their unwillingness to trust markets further weaken market development.

### Economic Policies Critical

Economic policies have stunted farmers' incentives to adopt new technology and strongly affect the production techniques that farmers do adopt. Policy problems include:

- *Sahelian currencies are overvalued.*—This makes imports relatively cheap and exports expensive, encouraging food imports and depressing farm prices. The rates have also encouraged imports of chemical fertilizer and other commercial inputs, but many analysts believe

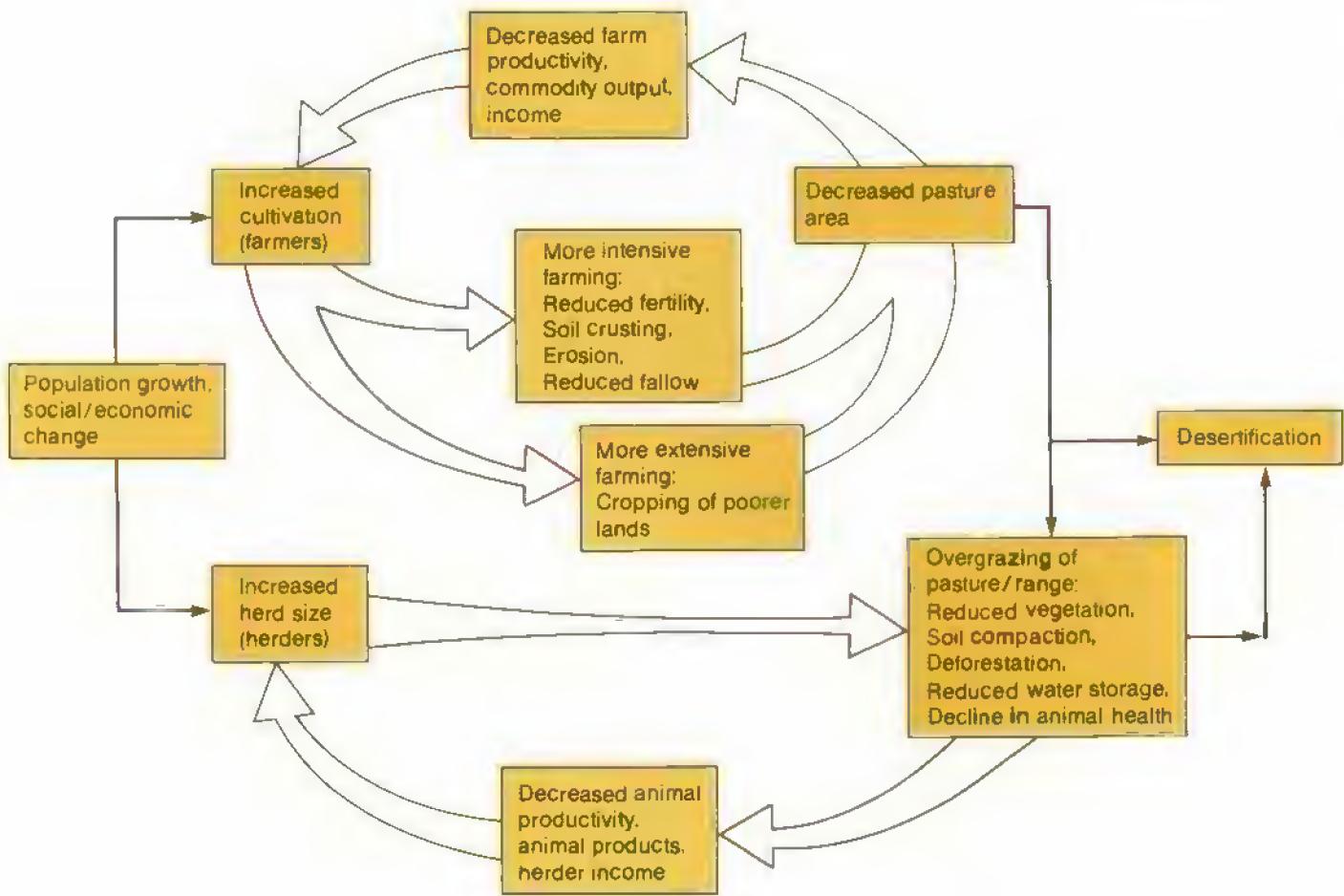
the net effect has been negative. The situation is worse when the domestic inflation rate exceeds that of foreign currencies, and when local interest rates are kept high.

- *Wage rates are skewed.*—In almost all Sahelian countries, policies establishing relatively high minimum urban wages not tied to productivity have led to artificially skewed urban-rural income disparities, and have drawn labor out of the rural sector. So farmers cannot attract the labor they need.
- *Cheap food policies hamper production.*—Many Sahelian governments maintain low urban grain prices through imports, food aid, and low ceilings on farm prices. Such policies increase the disparity between rural and urban living standards, accelerate urban migration, raise budget deficits, and depress incentives for adopting farm-level technology.

### Potential Exists for Increased Productivity

Considering the limited role of large-scale irrigation in the Sahel, increased productivity in rainfed agriculture is imperative. But can traditional production techniques meet the Sahel's future needs?

Development specialists are not convinced that a low-resource approach by itself can achieve these objectives. The record shows that low-resource approaches to agricultural development, focusing on labor-intensive cropping systems using manures and few purchased inputs, have proven incapable of achieving annual agricultural growth rates much above 1 percent.



However, parts of the low-resource approach can be modified to emphasize conservation, and used with somewhat more purchased inputs to induce both productivity gains and sustainable agricultural growth.

A number of suitable dryland production techniques have been developed. Many of these are already used in India, Australia, the U.S., and other countries.

Dryland techniques include on-farm micro water catchments such as furrow-dikes, bunds, and dikes; small-scale soil-conserving tillage practices using animal power; chemical and natural rock-phosphate fertilizers; mulching; agro-forestry; and alley cropping. Research shows that using moisture-conserving furrow-dikes and chemical fertilizers, for example, could raise the Sahel's food production and farm income 50 to 70 percent, and reduce soil erosion by as much as 70 percent.

#### What Needs To Be Done?

In the absence of better soil and water management, crop production and livestock output will not increase significantly. Economic incentives alone may simply intensify current

cultivation practices and continue to degrade the land. A new production process is required, one based on modest commercial inputs and technologies that are fully integrated with proven traditional methods, together with appropriate price signals.

Because of weather variability, year-to-year swings in Sahelian crop yields and farm output can be expected. These ups and downs need to be reduced. New dryland techniques would help meet this goal. More stable agricultural output will, in turn, enhance investment incentives for additional output-enhancing practices.

New techniques should be applied to staple grain crops (which account for 90 percent of cultivated area in the Sahel) if they are to affect overall agricultural productivity and rural diets. The techniques must be affordable for the low-resource, capital-limited Sahelian farmers.

New techniques will be more readily adopted if they reduce farm labor requirements or shift labor from peak to slack periods. Otherwise, labor shortages are likely to arise at critical stages.

The mixed-cropping systems and rotations of cereals and legumes traditionally followed by Sahelian farmers could be developed further to include short-season varieties of millet and sorghum. With different crop maturity dates, the demand for cultivation and harvest labor can be spread out over the season.

### A Green Revolution in the Sahel?

While new technology and management practices have stimulated agricultural development elsewhere, new technologies have often fared poorly in the Sahel. For example, Green Revolution technology dramatically increased food crop productivity in Asia, Latin America, and other parts of Africa, but not in the Sahel.

The Green Revolution's grain output growth was based largely on yield gains from high-yielding crop varieties (HYV's). Most HYV's are effective and profitable only when combined with water control and chemical fertilization.

But water control is largely absent in the Sahel. Sahelian soils are also shallower, have poorer texture, are prone to greater erosion, and have lower water-holding capacities than soils elsewhere.

Sahelian farmers themselves have generally rejected the Green Revolution approach because HYV's rarely outperform traditional varieties. Farmers have learned that applying fertilizers in semiarid regions lacking water control is very risky, with a high probability of economic loss.

In the Sahel, crop breeding for drought tolerance offers little hope. HYV's and chemical fertilizers alone do little in the long run to improve soil moisture and maintain soil fertility—the most pressing problems in Sahelian agriculture.

**Sahelian Agriculture's Average Annual Growth Rates, 1962-88**

Country and commodity	Cropped area	Yield per hectare	Per capita production
Percent			
Sahel region	-0.3	-1.3	-1.6
<b>Selected nations</b>			
Mali			
Maize	-1.25	-1.33	-2.96
Rice	.33	.76	.68
Millet	.39	.31	.35
Niger			
Sorghum	6.94	-.04	4.77
Rice	5.89	-2.81	2.73
Millet	3.53	-1.03	2.38
Senegal			
Rice	-.96	.81	-1.92
Millet	-1.56	1.26	-.46

Source: USDA-ERS, *World Agriculture Trends and Indicators*, draft statistical bulletin, 1989.

Farmers will need government support to adopt new resource-conserving technologies. Incentives can include more secure land tenure arrangements and improved access to production credit with low transaction costs. Here, the terms of credit could reflect that the returns to land- and water-conserving practices accrue over long time horizons.

Farming will always be risky in the Sahel. But more efforts to conserve soil and water could cut the risks. Since some of the long-term benefits of resource conservation would also be enjoyed by society at large, the on-farm costs of making the necessary capital investments could be borne, in part, by the general population. Extension systems must be strengthened to increase farmers' use of improved soil and water management systems.

Efforts to encourage voluntary population control are important. These efforts could help bring the population into closer balance with the land's carrying capacity.

Successful efforts to promote a viable technology will include a supportive policy environment. Appropriate policies on wage rates, interest rates, trade, and food aid can be powerful tools for influencing technology transfer in agriculture. [John Day (202) 786-1448]



### Liberalizing World Trade In Wheat

This special article kicks off a series that summarizes research on what could be the biggest development of our times for farmers—moving toward free trade in agriculture. Ever since Adam Smith, the founder of modern economics, wrote *The Wealth of Nations* in 1776, economists have been railing against trade barriers.

While theory says that free trade benefits society, there are adjustment costs, and gainers and losers, in moving away from protectionism. Because there never has been free trade in agriculture, the findings in these articles will be, of necessity, speculative. A longer, in-depth research report lies behind each article, and will be available from the authors.  
—Ed.

Negotiators in the Uruguay Round of multilateral trade negotiations have agreed on policy reforms that could phase down government agricultural support. Because of the current interest in trade reform, researchers have asked: "What would the world wheat market look like after the elimination of all domestic support and trade programs in the major exporting and importing countries?"

Several studies indicate that world prices could rise considerably in the long run, and that the distribution of production and consumption across countries would change significantly. However, total world trade in wheat is unlikely to change substantially, researchers generally agree. With domestic supports removed, stockholding levels and patterns would also change, possibly leading to interest in an international grain reserve.

#### Policies Have Cut World Prices

Global recession, the international debt crisis, and growing world wheat production all contributed to reduced world wheat trade in the mid-1980's. World wheat prices fell by a third and world stocks grew by two-thirds between 1981 and 1987. Still, wheat accounted for 17 percent of world agricultural trade volume in 1987.

Government policies, particularly in the major exporting countries, have encouraged production and exports through price and income supports, as well as through export subsidies. Importing countries that also grow wheat have relied increasingly on quotas, variable levies, and other protectionist measures to insulate domestic prices from world prices, thereby destabilizing world markets and reducing international prices.

These policies have escalated government expenditures and boosted interest in trade reform. Between 1979 and 1985, government costs for agriculture about doubled in the EC, Australia, and the U.S.

When the Uruguay Round of the General Agreement on Tariffs and Trade (GATT) began 2 years ago, participants acknowledged that the world commodity market was in disorder, and recognized the need to increase GATT's role beyond its traditional focus on trade policies in order to spur reform in domestic farm support programs.

Since the negotiations began, production cutbacks and droughts in key producing areas have reduced wheat stocks and increased prices. But with a return to normal weather, burdensome stocks could easily return.

#### Producer Subsidy Equivalents (PSE's) For Wheat 1/

Countries	PSE 2/ Percent
<b>Exporters</b>	
European Community	
Durum	38.4
Soft	47.1
United States	36.5
Canada	30.4
Australia	6.8
Argentina	4.8
<b>Importers</b>	
Japan	97.8
Taiwan	64.8
Brazil	63.4
South Korea	59.9
Mexico	18.8
South Africa	18.3
India	-35.3
Nigeria	-18.7
Soviet Union	na
China	na

1/ 1982-86 average. 2/ The ratio of Government direct payments to total farm revenue (including direct payments), as a percentage. A negative PSE means that the net effect of government policies is to tax producers.

Source: USDA-ERS, Estimates of Producer and Consumer Subsidy Equivalents, April 1988.

na = not available.

#### Sources of Assistance to Wheat Producers 1/

Policy	Australia	Argentina	Canada	EC	Japan	U.S.
	2/ Percent					
Price/ Income support	65	0	43	100	87	73
Input subsidies	13	0	3	0	13	16
Marketing	3	0	41	0	0	2
Long-Term	19	0	6	3/	0	4
Other	0	100	7	0	0	5

1/ 1982-86 average. 2/ Argentina taxed producers until December 1987. When combined with exchange rate adjustments, Argentina's PSE was positive, but quite small, during 1982-86. Taxes were reinstated in spring 1989. 3/ Negligible.

Price/income support: Tariffs, state marketing control, price stabilization, minimum support prices, deficiency payments, income guarantees, crop insurance subsidies, non-input tax concessions.

Input subsidies: Fertilizer, pesticide, fuel, water, and labor subsidies, tax concessions, and interest and other credit concessions.

Marketing subsidies: Processing, transportation, inspection, and sales promotion subsidies, and marketing credits.

Long term: Research and extension outlays, structural development projects.

Other: Exchange rate adjustments (Argentina); provincial programs (Canada); taxation and State programs (U.S.).

Source: USDA-ERS, Estimates of Producer and Consumer Subsidy Equivalents, April 1988.

## **Domestic Policies Can Be Trade Barriers**

The GATT has lowered trade barriers for manufacturing products more effectively than for agricultural products because it treats manufactured goods differently. Certain trade practices that are permitted for agricultural products, including import restrictions and export subsidies, are not allowed for manufacturing products.

Domestic and trade policies that influence market signals are particularly common in the world wheat market. Domestic farm policies include price and income supports and production subsidies. Restrictive trade policies include import quotas, variable import levies, and export subsidies, as well as import and export licensing.

Trade measures and domestic policies work together, and both influence the world market. In the EC, the variable levy, a type of import tax, maintains relatively high domestic wheat prices by keeping out lower-priced foreign wheat.

In the U.S., relatively high Government loan rates (i.e., minimum prices) in the early 1980's supported world wheat prices and stimulated world production, but pushed down U.S. exports and built up stocks.

Under the 1985 Food Security Act, lower loan rates and target prices, lower domestic prices, and the Export Enhancement Program (which allowed the U.S. to compete against other subsidizing countries' export prices) spurred U.S. exports and cut stocks. Incomes are supported by payments for the deficiency between the target price and the higher of the market price or the loan rate. Until the 1988 drought, U.S. farm policies, EC subsidies, and large stocks kept world wheat prices at reduced levels.

## **There Are Many Barriers To World Wheat Trade**

The level of support provided to wheat farmers varies among major producers. Producer Subsidy Equivalents (PSE's), defined as the ratio of direct government payments to total farm revenue (including direct payments), provide a comparable measure of different nations' government support to farmers. The PSE's of the major wheat-producing countries show that the EC offered the most support to wheat producers during 1982-86, followed by the U.S. and Canada.

Agricultural policies in many countries guarantee producer prices and incomes. The EC's Common Agricultural Policy uses intervention purchasing at guaranteed prices, a variable import levy, and export subsidies to shield internal prices from world prices. The U.S. uses loan rates, target prices, and producer and Government storage programs. But farmers must participate in acreage reduction programs to receive income supports.

Price and income supports are not the only policy tools used to support wheat farmers. Canada's transportation subsidy, which is being phased out, accounted for about two-fifths of

producer assistance in 1982-86. Australia's long-term research for improved seeds, agronomic research, and similar items accounted for almost 20 percent of its limited support.

In contrast, Argentina's export taxes and exchange rate adjustments resulted in low levels of producer assistance, and frequently acted as a producer tax.

Among importers, Japan, Taiwan, Brazil, and South Korea heavily support their wheat farmers, primarily through tariff and quota policies. Producers in China, the Soviet Union, and other centrally planned economies also face substantial, but unquantified, government involvement in agriculture.

## **Most Efficient Producers To Gain From Reform**

The 1987 proposals to the GATT from the U.S. and the Cairns Group, a coalition of several major exporting nations, called for substantial long-term policy reform. The original proposals of the EC, Japan, and the Nordic countries focused less on long-term adjustments and more on correcting short-run market imbalances.

At the April 1989 midterm review, negotiators agreed on a framework for both long- and short-term reform (see the May *Agricultural Outlook*). Short-term measures include freezing support and protection levels in 1989, with unspecified reductions slated for 1990. Long-term measures call for "substantial progressive reductions" in agricultural support, encompassing all measures directly or indirectly affecting import access, internal supports, and export competition.

In the absence of government intervention, economic theory indicates that production would shift to those areas which can deliver at the lowest cost. This adjustment would take place both within and across countries. In any one country, the most efficient farmers would fare the best.

## **Who Are the Major Wheat Traders?**

The U.S. is the world's largest wheat exporter, with a 36-percent market share between 1985 and 1988. Canada had 19 percent of the market, followed by the EC (18 percent), Australia (14 percent), and Argentina (5 percent). The U.S. and EC are two of GATT's major negotiators; the other three countries are members of the Cairns Group.

The world's largest wheat producers are the Soviet Union and China. These two countries each produced 17 percent of the world's total, on average, between 1985 and 1988, and together produced nearly as much as the five major exporters.

But the Soviet Union and China are also the world's largest consumers and importers. Together, they accounted for about 40 percent of world wheat consumption during 1985-88. The Soviet Union's imports were 18 percent of the world's total, and China's share was 12 percent.

Policy  
Liberalization  
Would  
Affect...



**World Trade Volume**

*World trade volume would not likely change substantially.*

**World Market Prices**

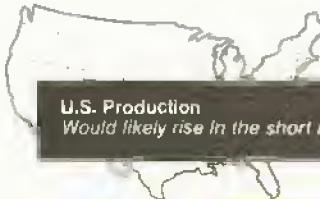
*World prices may rise 25% in the long run*

Lower producer prices in certain exporting countries would likely dampen production.

In the absence of government subsidies, certain importers would likely look more to the world market as production falls.

World prices would likely rise as certain exporters cut back on production.

Rice would also be pushed up as importers look more to the world market for supplies.



**U.S. Production**  
*Would likely rise in the short run.*

**U.S. Producer Incomes**  
*Uncertain in the long run.*

**U.S. Wheat-Related Asset Values**  
*Would likely fall in the short run.*

Acreage reduction and conservation reserve programs would be phased out.

But some marginal land would likely leave wheat production in the long run if it cannot be profitably farmed without the help of government supports.

Wheat producer incomes would fall in the short run if government support to agriculture is completely removed.

However, an increase in export demand or government decoupled income assistance would support higher wheat producer incomes in the long run.

Asset values would likely fall in the absence of government support.

But greater export demand in the long run would likely result in some recovery in asset values.

Consumption shifts likely would not be as large as production shifts. Consumers are less responsive to changes in wheat prices than producers are.

**World Wheat Prices Could Rise**

Studies disagree on whether the volume of world wheat trade would rise or fall after substantial trade reform. The result depends on whether importers or exporters protect their producers more. As importers remove protection, their domestic prices (initially above world prices) likely would fall, their production decline, and their imports increase. These forces would push up now-depressed world prices. At the same time, despite higher world prices, some exporting countries' production should also decline as subsidies are removed and domestic prices fall toward world prices.

If production declines are larger in the major wheat-exporting countries than in importing countries, world trade could contract rather than expand. However, on balance, research suggests that world trade volume would likely not change substantially. Some exporters would expand production, while other exporters would cut production.

World wheat prices under trade liberalization likely would rise as exporters cut back production and importers looked even more to the world market. Even if world market prices rose, however, the removal of high supports could reduce domestic producer and consumer prices in countries with relatively high protection, such as the EC and Japan.

Studies suggest that world wheat prices may increase as much as one-fourth, but the rise would be damped depending on how much land now idled under U.S. acreage reduction programs returned to production. Over the long run, higher prices suggest that some importing countries might increase their wheat production.

**Effects on Price Stability Unclear**

Some research suggests that after policy reform, a world supply or demand shock such as a crop disaster would result in a smaller world price movement than under the current regime. This is because removing trade barriers means that a greater number of market participants, both producers and consumers, would share in adjusting to this shock, easing the burden on those most vulnerable to change. Greater price stability could further encourage countries, particularly developing countries, to look to the world market for their domestic supplies.

Some argue, however, that liberalization could contribute to price instability. Stockholding countries, such as the U.S. and EC, might reduce their stocks with the elimination of support programs linked to the direct or indirect acquisition of surpluses.

With lower world stocks, prices could be more sensitive to fluctuations in yields and imports. As a result, liberalization could heighten interest in an international wheat stockholding mechanism, as exporters shed their traditional role of holding large stocks. The net effect of world adjustment to lower stocks is unclear.

### ***U.S. Wheat Production Likely Would Increase in the Short Run***

In the U.S., what happens to wheat production after liberalization depends largely on the response of other major exporters, the comparative advantage of the U.S. relative to the rest of the world, and the world market prices of different commodities.

Depending on production costs and relative prices among countries and commodities, U.S. wheat production likely would rise somewhat in the short run if the acreage reduction and conservation reserve programs were phased out. But if a large portion of cropland re-entered production, average U.S. wheat yields would fall because the land currently idled is less productive.

If Government support to agriculture is completely removed, U.S. farm prices and incomes may fall somewhat and become more variable in the short run. This likely would cause land prices to fall. But a rise in export demand over the long run—or Government income assistance not tied to production—may offset land value declines and result in more stable incomes.

### ***U.S. Probably Has a Long-Run Advantage in Wheat Production***

The U.S. probably has a long-term comparative advantage in wheat production because of its climate, soil fertility, and well-developed production and distribution system. Trade reform likely would enhance the long-term U.S. position, since the most efficient producers would gain the most from substantial trade reform.

Not all U.S. producers would benefit from trade liberalization, however, if all Government support were removed. Producers who cannot cover their costs over the long run without Government support, or who cannot absorb increased variability in returns, would have several choices.

Farmers could find that using wheat land for cattle grazing or other farming operations would earn an acceptable return; they could subsidize wheat production with other income, hoping that their wheat production would become more profit-

able over time; or they could leave farming. In the absence of some form of income supports, farmers with heavy debt loads likely would have major problems.

The U.S. wheat sector likely would become increasingly concentrated. Over time, the costs of production probably would fall as farmers spread the fixed costs of machinery and equipment over a larger number of acres, while using management and labor more efficiently.

### ***Trade Reform Need Not Reduce Income Supports***

Under the April agreement, countries are welcome to propose ways to assist their farmers, so long as the assistance does not distort trade.

Several policy tools could ease or prevent structural transitions. Farmers may be assisted by decoupled income-support payments, for instance, which are not tied to production. Such payments are similar to the trade adjustment assistance that workers in other industries can now receive if they are materially injured by international trade.

An alternative is a revenue insurance program, in which farmers pay an insurance premium in order to receive benefits when farm revenues fall below some trigger level. Such programs would support producer incomes without distorting production and consumption signals across countries. Other policy tools are also being considered.

In any case, U.S. trade policy officials have stressed that elimination of domestic support and trade programs must be matched by similar actions in other countries.

Aside from the trade negotiations, the U.S. has been moving toward a more market-oriented policy for the major grains. The Food Security Act of 1985 includes features that increase the market's influence on producers' decisions. Target prices and loan rates have fallen, program yields have been frozen, and it is more difficult to increase the number of acres eligible for program payments. [Joy Harwood (202) 786-1840]

# Statistical Indicators

## Summary Data

Table 1.—Key Statistical Indicators of the Food & Fiber Sector

	1988				1989				1990 F	
	I	II	III	IV	Annual	I	II F	III F	IV F	
Prices received by farmers (1977=100)	133	142	144	138	138	149	141	137	--	140
Livestock & products	148	151	152	150	150	159	154	151	--	154
Crops	117	133	135	125	125	138	135	134	--	133
Prices Paid by farmers, (1977=100)										
Production items	155	159	162	157	157	163	162	--	--	168
Commodities & services, interest, taxes, & wages	168	172	173	170	170	175	177	--	--	180
Cash receipts (\$ bil.) 1/	157	168	135	150	150	159	159	167	--	156-163
Livestock (\$ bil.)	75	83	78	78	78	81	81	83	--	79-82
Crops (\$ bil.)	82	85	57	72	72	78	78	84	--	72-76
Market basket (1982-84=100)										
Retail cost	115	118	118	116	116	123	--	--	--	--
Farm value	99	104	100	100	100	107	--	--	--	--
Spread	123	126	128	124	124	131	--	--	--	--
Farm value/retail cost (%)	30	30	30	30	30	30	--	--	--	--
Retail prices (1982-84=100)										
Food	117	119	120	118	118	123	123	124	--	--
At home	115	118	119	117	117	122	122	123	--	--
Away from home	121	123	123	122	122	125	127	128	--	--
Agricultural exports (\$ bil.) 2/	8.7	8.7	10.3	35.3	35.3	10.9	9.5	8.3	9.5	39.0
Agricultural imports (\$ bil.) 2/	5.0	5.1	5.2	21.0	21.0	5.5	5.1	5.2	5.2	21.0
Commercial production										
Red meat (mil. lb.)	9,683	10,139	10,269	39,763	39,763	9,594	9,996	9,900	9,908	39,398
Poultry (mil. lb.)	5,209	5,213	5,180	20,587	20,587	5,070	5,540	5,580	5,555	21,545
Eggs (mil. doz.)	1,428	1,421	1,446	5,771	5,771	1,391	1,385	1,390	1,435	5,801
Milk (bil. lb.)	37.9	36.0	35.4	145.5	145.5	36.6	38.4	36.6	35.9	147.5
Consumption, per capita										
Red meat and poultry (lb.)	54.2	54.9	56.4	219.2	219.2	52.7	55.2	55.2	56.7	219.8
Corn beginning stocks (mil. bu.) 3/	7,635.2	5,835.5	4,259.1	4,881.7	4,881.7	7,071.6	5,205.0	--	--	4,259.1
Corn use (mil. bu.) 3/	1,801.3	1,576.9	2,109.4	7,698.7	7,698.7	--	--	--	--	--
Prices 4/										
Choice steers--Omaha (\$/cwt)	72.81	66.92	70.14	69.54	69.54	73.85	73.74	69.73	69.75	71.74
Barrows & gilts--7 mktas. (\$/cwt)	65.90	44.24	38.66	43.39	43.39	40.78	42.43	41.43	38.44	40.43
Broilers--12-city (cts./lb.)	55.6	66.1	57.9	56.3	56.3	59.4	67.68	65.69	55.61	61.64
Eggs--NY Gr. A large (cts./doz.)	53.3	72.9	67.3	62.1	62.1	78.6	75.75	73.77	72.78	74.77
Milk--all at plant (\$/cwt)	11.43	11.87	13.30	12.22	12.22	13.07	12.10-	12.00-	12.75-	12.45-
Wheat--Kansas City HRW (\$/bu.)	3.38	3.86	4.11	3.64	3.64	4.36	--	--	--	--
Corn--Chicago (\$/bu.)	2.29	2.84	2.75	2.46	2.46	2.75	--	--	--	--
Soybeans--Chicago (\$/bu.)	7.01	8.38	7.91	7.36	7.36	7.59	--	--	--	--
Cotton--Avg. spot mkt. (cts./lb.)	61.5	58.5	52.3	57.8	57.8	56.1	--	--	--	--
	1981	1982	1983	1984	1985	1986	1987	1988	1989 F	
Gross cash income (\$ bil.)	146.0	150.6	150.4	155.2	156.7	152.0	160.5	170	168-173	
Gross cash expenses (\$ bil.)	113.2	112.8	113.5	116.6	110.2	100.6	103.3	113	115-119	
Net cash income (\$ bil.)	32.8	37.8	36.9	38.7	46.6	51.4	57.1	58	50-55	
Net farm income (\$ bil.)	26.9	23.5	12.7	32.3	32.2	37.4	46.3	44	47-52	
Farm real estate values (1977=100) 5/	158	157	148	146	128	112	103	106	112	

1/ Quarterly data seasonally adjusted at annual rates. 2/ Annual data based on Oct.-Sept. fiscal years ending with year indicated.

3/ Dec.-Feb. first quarter; Mar.-May second quarter; June-Aug. third quarter; Sept.-Nov. fourth quarter; Sept.-Aug. annual. Use includes exports & domestic disappearance. 4/ Simple averages. 5/ Nominal values as of February 1. F = forecast. -- = not available.

## U.S. and Foreign Economic Data

**Table 2.—U.S. Gross National Product & Related Data**

	Annual			1988				1989	
	1986	1987	1988	I	II	III	IV	I R	
	\$ billion (quarterly data seasonally adjusted at annual rates)								
Gross national product	4,240.3	4,526.7	4,864.3	4,724.5	4,823.8	4,909.0	4,999.7	5,105.0	
Personal consumption expenditures	2,807.5	3,012.1	3,227.5	3,128.1	3,194.6	3,261.2	3,326.4	3,377.2	
Durable goods	406.5	421.9	451.1	437.8	449.8	452.9	464.0	459.4	
Non durable goods	943.6	997.9	1,046.9	1,016.2	1,036.6	1,060.8	1,073.9	1,093.0	
Clothing & shoes	167.0	178.2	186.4	180.5	183.2	188.4	193.6	193.9	
Food & beverages	501.0	526.4	551.5	535.9	546.3	558.9	564.9	578.7	
Services	1,457.3	1,592.3	1,729.6	1,674.1	1,708.2	1,747.5	1,788.5	1,824.8	
Gross private domestic investment	665.9	712.9	766.5	763.4	758.1	772.5	772.0	793.6	
Fixed investment	650.4	673.7	718.1	698.1	714.4	722.8	737.2	750.0	
Change in business inventories	15.5	39.2	48.4	65.3	43.7	49.7	34.7	43.5	
Net exports of goods & services	-104.4	-123.0	-94.6	-112.1	-90.4	-80.0	-96.1	-77.5	
Government purchases of goods & services	871.2	924.7	964.9	945.2	961.6	955.3	997.5	1,011.8	
1982 \$ billion (quarterly data seasonally adjusted at annual rates)									
Gross national product	3,721.7	3,847.0	3,996.1	3,956.1	3,985.2	4,009.4	4,033.4	4,076.5	
Personal consumption expenditures	2,455.2	2,521.0	2,592.2	2,559.8	2,579.0	2,603.8	2,626.2	2,633.6	
Durable goods	385.0	390.9	409.7	401.1	410.6	410.4	416.5	411.9	
Non durable goods	879.5	890.5	899.6	892.7	893.6	904.5	907.4	911.4	
Clothing & shoes	157.6	160.5	161.1	159.6	156.3	164.2	164.1	164.3	
Food & beverages	448.0	450.4	453.3	451.4	453.2	453.8	454.8	459.9	
Services	1,190.7	1,239.5	1,283.0	1,265.9	1,274.8	1,288.9	1,302.2	1,310.3	
Gross private domestic investment	643.5	674.8	721.8	728.9	715.1	726.1	717.1	732.4	
Fixed investment	628.1	640.4	679.3	662.9	679.7	686.6	688.0	694.4	
Change in business inventories	15.4	34.4	42.5	66.0	35.3	39.5	29.1	38.0	
Net exports of goods & services	-137.5	-128.9	-100.2	-109.0	-92.6	-93.9	-105.4	-87.8	
Government purchases of goods & services	760.5	780.2	782.3	776.4	783.8	773.5	795.5	798.3	
GNP implicit price deflator (% change)	2.7	3.3	3.4	1.7	5.5	4.7	5.3	3.9	
Disposable personal income (\$ bil.)	3,019.6	3,209.7	3,471.8	3,375.6	3,421.5	3,507.5	3,582.5	3,696.0	
Disposable per. income (1982 \$ bil.)	2,640.9	2,686.3	2,788.3	2,762.3	2,762.2	2,800.4	2,828.4	2,882.2	
Per capita disposable per. income (\$)	12,496	13,157	14,103	13,760	13,919	14,231	14,497	14,924	
Per capita dis. per. income (1982 \$)	10,929	11,012	11,326	11,260	11,237	11,362	11,445	11,638	
U.S. population, total, incl. military abroad (mil.)	241.6	243.9	246.3	245.5	246.0	246.7	247.3	247.9	
Civilian population (mil.)	239.4	241.7	244.1	243.2	243.8	244.5	245.1	245.7	
	Annual			1988				1989	
	1986	1987	1988	Apr	Jan	Feb	Mar	Apr P	
Monthly data seasonally adjusted									
Industrial production (1977=100)	125.1	129.8	137.2	135.4	140.8	140.4	140.5	141.1	
Leading economic indicators (1982=100)	132.1	139.6	142.5	141.5	145.9	145.4	144.6	145.7	
Civilian employment (mil. persons)	109.6	112.4	115.0	114.6	116.7	116.9	117.1	117.1	
Civilian unemployment rate (%)	7.0	6.2	5.5	5.4	5.4	5.1	4.9	5.2	
Personal income (\$ bil. annual rate)	3,531.1	3,780.0	4,062.1	4,001.0	4,272.4	4,316.6	4,351.6	4,369.3	
Money stock-M2 (daily avg.) (\$ bil.) 1/	2,811.2	2,909.9	3,069.4	2,990.3	3,065.6	3,069.4	3,079.1	3,081.2	
Three-month Treasury bill rate (%)	5.98	5.82	6.69	5.92	8.29	8.48	8.83	8.70	
AAA corporate bond yield (Moody's) (%)	9.02	9.38	9.71	9.67	9.62	9.64	9.80	9.79	
Housing starts (1,000) 2/	1,805	1,621	1,488	1,576	1,678	1,465	1,399	1,361	
Auto sales at retail, total (mil.)	11.4	10.3	10.6	10.5	9.9	9.9	9.5	10.8	
Business inventory/sales ratio	1.55	1.50	1.51	1.50	1.48	1.50	1.51	--	
Sales of all retail stores (\$ bil.)	121.2	125.5	134.4	133.2	140.0	139.4	139.4 P	139.9	
Nondurable goods stores (\$ bil.)	73.9	76.9	83.6	81.2	86.2	86.4	86.8 P	87.3	
Food stores (\$ bil.)	24.6	25.3	27.6	27.0	28.7	29.0	29.0 P	29.2	
Eating & drinking places (\$ bil.)	12.1	12.7	13.1	12.7	13.8	13.7	13.7 P	13.5	
Apparel & accessory stores (\$ bil.)	6.7	7.1	7.0	6.5	7.2	7.0	6.9 P	7.2	

1/ Annual data as of December of the year listed. 2/ Private, including farm. R = revised. P = preliminary. -- = not available.

Information contact: James Malley (202) 786-1782.

**Table 3.—Foreign Economic Growth, Inflation, & Export Earnings**

	Average 1975-79	1980	1981	1982	1983	1984	1985	1986	1987	1988 P	1989 F	1990 F
Annual percent change												
Total foreign												
Real GNP	3.7	2.6	1.6	1.7	2.0	3.2	3.0	2.8	3.1	4.0	3.1	3.1
CPI	14.0	17.1	15.8	14.7	18.8	22.8	22.6	11.8	16.6	34.4	50.6	67.2
Export earnings	14.6	22.2	-2.7	-7.0	-2.6	5.6	1.9	11.0	18.8	13.6	9.8	9.3
Developed less U.S.												
Real GNP	3.1	2.4	1.4	1.1	1.9	3.4	3.3	2.4	3.1	4.0	3.1	2.6
CPI	9.4	10.9	9.6	8.0	6.0	5.1	4.7	2.8	2.6	2.9	4.0	3.4
Export earnings	14.9	17.0	-3.3	-4.3	-0.5	6.3	4.6	19.4	17.6	12.5	11.0	9.1
Centrally planned												
Real GNP	3.5	1.5	2.1	2.7	2.7	1.9	1.3	3.2	1.4	3.3	2.5	2.6
Export earnings	16.1	16.5	3.4	6.0	8.2	1.5	-5.1	7.3	6.7	5.2	5.6	8.1
Latin America												
Real GNP	5.1	5.4	0.9	-0.5	-3.2	3.5	3.7	4.1	2.8	-0.1	-1.1	3.7
CPI	53.7	64.0	67.9	75.1	130.0	177.9	184.9	88.9	140.5	318.0	484.4	673.1
Export earnings	12.8	30.1	5.3	-10.1	-0.8	6.7	7.3	-14.2	8.8	17.5	1.7	1.2
Africa & Middle East												
Real GNP	6.4	1.3	0.0	1.4	0.1	1.1	0.0	-1.2	1.4	3.5	2.2	3.4
CPI	16.4	24.6	17.3	12.9	16.7	19.4	11.2	11.7	13.5	24.2	21.9	15.4
Export earnings	13.2	37.9	-9.2	-19.7	-17.5	-6.1	-4.6	-20.8	23.7	3.9	4.3	4.8
Asia												
Real GNP	6.8	6.3	6.6	3.6	6.6	5.4	4.0	5.8	6.7	8.2	6.6	5.6
CPI	8.4	16.4	14.1	7.3	7.7	8.5	5.2	4.5	5.4	6.8	7.3	7.7
Export earnings	18.6	27.8	6.8	-0.3	3.4	13.1	-0.8	6.0	28.1	25.8	12.4	11.5

P = preliminary. F = forecast.

Information contact: Timothy Baxter (202) 786-1706.

## Farm Prices

**Table 4.—Indexes of Prices Received & Paid by Farmers, U.S. Average**

	Annual			1988				1989			
	1986	1987	1988	May	Dec	Jan	Feb	Mar	Apr	May P	
				1977=100							
Prices received											
All farm products	123	127	138	134	145	149	148	149	147	151	151
All crops	107	106	125	117	136	140	138	136	140	145	145
Food grains	109	103	138	125	157	160	161	162	161	162	162
Feed grains & hay	98	85	120	104	134	137	137	138	139	138	138
Feed grains	96	81	117	97	130	133	132	132	131	130	130
Cotton	91	98	95	96	91	89	88	93	97	95	95
Tobacco	138	129	132	126	145	145	145	143	144	144	144
Oil-bearing crops	77	79	107	102	113	116	112	112	110	108	108
Fruit, all	170	182	181	197	192	177	176	158	166	200	200
Fresh market 1/	178	193	194	212	207	190	188	166	176	216	216
Commercial vegetables	130	144	142	116	146	179	167	149	171	174	174
Fresh market	123	147	137	103	147	185	163	146	168	168	168
Potatoes & dry beans	114	126	124	117	158	163	171	194	208	255	255
Livestock & products	138	146	150	151	154	158	158	161	154	158	158
Meat animals	145	163	168	176	166	174	176	176	170	174	174
Dairy products	129	129	126	117	139	138	135	131	127	126	126
Poultry & eggs	128	107	118	106	126	129	128	150	139	147	147
Prices paid											
Commodities & services,											
Interest, taxes, & wage rates	159	161	170	--	--	175	--	--	177	--	--
Production items	147	147	157	--	--	163	--	--	165	--	--
Feed	108	103	128	--	--	141	--	--	140	--	--
Feeder livestock	153	179	191	--	--	202	--	--	185	--	--
Seed	148	148	150	--	--	150	--	--	170	--	--
Fertilizer	124	118	130	--	--	133	--	--	141	--	--
Agricultural chemicals	127	124	126	--	--	128	--	--	133	--	--
Fuels & energy	162	161	166	--	--	166	--	--	185	--	--
Farm & motor supplies	144	144	148	--	--	153	--	--	155	--	--
Autos & trucks	198	208	215	--	--	216	--	--	226	--	--
Tractors & self-propelled machinery	174	174	181	--	--	188	--	--	192	--	--
Other machinery	182	185	198	--	--	203	--	--	209	--	--
Building & fencing	136	137	138	--	--	139	--	--	140	--	--
Farm services & cash rent	145	146	147	--	--	151	--	--	151	--	--
Interest payable per acre on farm real estate debt	211	190	186	--	--	190	--	--	190	--	--
Taxes payable per acre on farm real estate	138	139	142	--	--	187	--	--	144	--	--
Wage rates (seasonally adjusted)	160	166	172	--	--	187	--	--	187	--	--
Production items, interest, taxes, & wage rates	150	151	161	--	--	166	--	--	167	--	--
Ratio, prices received to prices paid (%)/2/	77	79	81	80	84	85	85	85	83	85	85
Prices received (1910-14=100)	561	578	630	614	663	682	677	679	672	691	691
Prices paid, etc. (parity index) (1910-14=100)	1,093	1,110	1,167	--	--	1,207	--	--	1,220	--	--
Parity ratio (1910-14=100) (%)/2/	51	52	54	--	56	57	--	--	55	--	--

1/ Fresh market for noncitrus; fresh market & processing for citrus. 2/ Ratio of index of prices received for all farm products to index of prices paid for commodities and services, interest, taxes, and wage rates. Ratio derived using the most recent prices paid index. Prices paid data are quarterly and will be published in January, April, July, and October. P = preliminary. R = revised.

-- = not available.

Information contact: National Agricultural Statistics Service (202) 447-5446.

Table 5.—Prices Received by Farmers, U.S. Average

	Annual 1/			1988		1989				
	1986	1987	1988	May	Dec	Jan	Feb	Mar	Apr R	May P
Crops										
All wheat (\$/bu.)	2.71	2.55	3.33	2.97	3.94	4.01	4.03	4.07	4.03	4.07
Rice, rough (\$/cwt)	5.04	4.59	7.79	7.97	6.60	6.47	6.59	6.47	6.66	6.53
Corn (\$/bu.)	1.96	1.56	2.27	1.94	2.53	2.60	2.58	2.59	2.56	2.58
Sorghum (\$/cwt)	3.11	2.56	3.66	2.90	3.99	4.09	4.05	4.03	4.16	4.06
All hay, baled (\$/ton)	61.60	62.40	78.30	81.10	89.90	91.20	93.70	98.10	104.00	104.00
Soybeans (\$/bu.)	5.00	5.08	7.21	6.98	7.53	7.69	7.41	7.51	7.29	7.15
Cotton, upland (cts./lb.)	54.8	59.6	57.2	58.3	55.3	53.9	52.9	56.3	58.9	57.7
Potatoes (\$/cwt)	5.03	4.35	5.49	4.62	5.86	6.13	6.42	7.45	8.15	10.50
Lettuce (\$/cwt)	11.90	14.70	15.20	7.59	19.00	18.50	12.60	13.60	9.07	7.06
Tomatoes (\$/cwt)	25.10	26.00	26.80	23.00	19.90	43.40	45.20	34.10	55.80	65.90
Onions (\$/cwt)	10.90	12.50	9.99	8.85	14.00	12.30	10.80	9.70	10.90	9.00
Dry edible beans (\$/cwt)	19.10	17.67	22.38	18.30	30.30	29.60	31.30	33.00	32.80	32.60
Apples for fresh use (cts./lb.)	19.8	17.6	16.7	10.9	17.2	17.9	18.1	16.1	14.6	14.1
Pears for fresh use (\$/ton)	369.00	227.00	347.00	437.00	299.00	286.00	292.00	328.00	290.00	448.00
Oranges, all uses (\$/box) 2/	4.27	5.03	6.56	8.25	6.50	6.20	6.21	5.27	6.64	8.52
Grapefruit, all uses (\$/box) 2/	4.29	4.96	5.39	4.53	4.71	3.72	3.34	3.36	3.28	4.05
Livestock										
Beef cattle (\$/cwt)	52.80	61.40	66.80	69.30	67.20	70.60	71.50	72.00	70.00	70.10
Calves (\$/cwt)	60.90	78.10	89.80	93.40	88.60	92.80	95.90	94.00	90.50	89.30
Hogs (\$/cwt)	50.10	50.80	42.50	46.30	39.70	40.90	40.40	39.30	36.90	42.70
Lambs (\$/cwt)	69.10	77.90	69.50	72.60	68.60	67.40	68.40	72.50	75.20	73.50
All milk, sold to plants (\$/cwt)	12.50	12.50	12.20	11.40	13.50	13.40	13.10	12.70	12.30	12.20
Milk, manuf. grade (\$/cwt)	11.46	11.37	11.15	10.40	12.60	12.20	11.60	11.30	11.20	11.20
Broilers (cts./lb.)	34.5	28.8	34.0	33.7	35.5	35.3	35.2	38.7	38.9	45.2
Eggs (cts./doz.) 3/	61.2	53.1	53.2	44.0	59.7	63.9	62.1	80.1	65.3	62.0
Turkeys (cts./lb.)	44.4	34.3	36.5	29.8	37.6	35.4	38.3	40.0	42.3	43.4
Wool (cts./lb.) 4/	64.3	87.1	138.0	166.0	116.0	107.0	123.0	130.0	135.0	139.0

1/ Calendar year averages, except for potatoes, dry edible beans, apples, oranges, & grapefruit, which are crop years.

2/ Equivalent on-tree returns. 3/ Average of all eggs sold by producers including hatching eggs & eggs sold at retail.

4/ Average local market price, excluding incentive payments. P = preliminary. R = revised.

Information contact: National Agricultural Statistics Service (202) 447-5446.

## Producer & Consumer Prices

Table 6.—Consumer Price Index for All Urban Consumers, U.S. Average (Not Seasonally Adjusted)

	Annual		1988				1989			
	1988	Apr	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr
Consumer Price Index, all items	118.3	117.1	119.8	120.2	120.3	120.5	121.1	121.6	122.3	123.1
Consumer Price Index, less food	118.3	117.2	119.7	120.2	120.3	120.4	120.8	121.3	122.0	122.9
All food	118.2	116.6	120.2	120.3	120.2	120.7	122.2	122.9	123.5	124.2
Food away from home	121.8	120.7	123.0	123.4	123.7	124.1	124.7	125.2	125.7	126.2
Food at home	116.6	114.6	119.0	119.0	118.7	119.1	121.2	122.0	122.7	123.5
Meats 1/	112.2	110.8	113.4	113.0	113.0	112.7	114.0	114.3	115.5	115.6
Beef & veal	112.1	110.5	113.6	113.7	114.7	114.6	116.0	116.6	119.0	119.0
Pork	112.5	111.4	113.7	111.8	110.0	109.6	111.5	110.9	111.0	111.2
Poultry	120.7	110.2	133.4	129.4	127.2	127.1	128.8	128.4	130.3	133.0
Fish	137.4	139.3	136.0	137.4	138.7	138.9	144.0	142.9	144.3	143.3
Eggs	93.6	85.0	103.1	105.5	101.2	99.6	112.0	106.1	122.9	117.6
Dairy products 2/	108.4	107.1	108.9	109.9	110.6	111.4	112.6	113.4	113.8	114.1
Fats & oils 3/	113.1	110.3	115.9	117.1	117.1	118.5	119.6	120.5	120.4	121.6
Fresh fruit	143.0	139.9	153.3	149.7	144.3	143.2	145.4	150.0	149.5	152.4
Processed fruit	122.0	122.1	123.8	124.3	125.0	124.4	125.6	125.5	124.7	124.6
Fresh vegetables	129.3	127.5	132.1	129.4	126.7	133.0	141.4	144.4	140.2	144.1
Potatoes	119.1	111.2	124.8	125.2	126.0	128.5	130.8	138.3	146.6	158.9
Processed vegetables	112.2	108.4	116.4	117.9	118.1	118.9	120.9	121.8	122.7	124.4
Cereals & bakery products	122.1	119.8	124.7	125.6	125.9	126.6	127.9	128.9	129.7	130.4
Sugar & sweets	114.0	112.3	115.6	116.0	115.9	116.7	117.2	117.8	118.0	117.9
Beverages, nonalcoholic	107.5	107.8	107.4	108.1	108.2	107.8	109.6	111.3	111.3	111.8
Apparel commodities less footwear	114.4	116.6	117.0	119.9	119.1	116.8	113.5	113.4	118.1	120.0
Footwear	109.9	109.4	112.2	115.9	114.5	113.5	112.2	112.7	114.1	115.3
Tobacco & smoking products	145.8	142.9	148.9	149.3	149.7	149.9	157.0	158.5	159.2	159.5
Beverages, alcoholic	118.6	118.0	119.6	119.8	119.9	119.9	120.3	121.1	121.8	122.3

1/ Beef, veal, lamb, pork, & processed meat. 2/ Includes butter. 3/ Excludes butter.

Information contact: Ralph Parlett (202) 786-1870.

Table 7.—Producer Price Indexes, U.S. Average (Not Seasonally Adjusted)

	Annual			1988				1989			
	1986	1987	1988	Apr	Nov	Dec	R	Jan	Feb	Mar	Apr
	1982=100										
Finished goods 1/	103.2	105.4	108.0	107.0	109.8	110.0		111.0	111.7	112.2	113.0
Consumer foods	107.2	109.5	112.6	110.3	114.9	115.1		116.5	117.3	118.4	117.8
Fresh fruit	112.9	112.0	112.7	105.3	125.1	119.9		107.8	110.0	106.4	104.5
Fresh & dried vegetables	97.8	103.7	105.4	98.4	115.2	111.6		109.3	133.1	123.8	119.3
Dried fruit	91.9	95.0	99.1	99.3	100.7	100.8		101.1	101.1	103.0	102.9
Canned fruit & juice	111.0	115.3	120.1	119.7	121.8	122.4		121.8	120.7	122.1	122.0
Frozen fruit & juice	103.0	113.3	129.9	129.8	130.0	128.6		127.3	122.0	119.8	119.6
Fresh veg. excl. potatoes	99.3	99.0	100.4	98.5	103.8	96.7		93.4	119.9	111.0	107.1
Canned veg. & juices	101.2	103.5	108.3	103.1	116.5	117.3		119.4	119.7	120.3	119.4
Frozen vegetables	106.6	107.3	108.5	106.8	111.9	112.5		113.1	114.3	114.9	115.3
Potatoes	104.0	120.1	114.1	97.6	140.5	148.1		150.7	178.3	162.0	152.7
Eggs	99.5	87.6	88.6	73.1	99.7	100.3		116.5	96.7	135.8	110.8
Bakery products	116.6	118.4	126.4	123.7	130.3	130.6		132.5	133.2	133.0	133.7
Meats	93.9	100.4	99.9	99.0	97.4	99.0		102.6	102.4	103.7	103.2
Beef & veal	88.1	95.5	101.4	101.4	103.6	104.8		107.5	108.1	111.3	112.2
Pork	99.9	104.9	95.2	92.5	84.0	87.6		95.0	92.9	91.9	88.5
Processed poultry	116.7	103.4	111.4	100.2	118.3	115.3		115.7	115.0	123.9	125.1
Fish	124.9	140.0	151.7	149.8	151.9	151.8		161.3	161.8	161.4	158.3
Dairy products	99.9	101.6	102.2	100.0	105.5	106.2		107.3	106.8	106.3	105.5
Processed fruits & vegetables	104.9	108.6	113.8	111.5	117.9	118.5		119.1	119.1	119.4	119.1
Shortening & cooking oil	103.3	103.9	118.9	114.8	118.2	118.6		117.0	115.7	118.4	117.9
Consumer finished goods less foods	98.4	100.7	103.1	102.6	104.6	104.8		105.8	106.6	106.9	108.9
Beverages, alcoholic	110.1	110.3	111.9	111.7	112.3	112.0		112.1	114.0	115.0	115.5
Soft drinks	109.5	111.8	114.1	114.1	116.4	115.4		115.7	116.8	117.7	118.4
Apparel	106.3	108.3	111.7	110.8	112.8	113.1		113.7	114.0	113.8	114.0
Footwear	106.8	109.3	115.2	114.1	116.9	117.2		118.1	118.8	119.5	119.4
Tobacco products	142.4	154.6	171.9	166.8	175.5	184.7		187.5	187.7	187.4	187.4
Intermediate materials 2/	99.1	101.5	107.1	105.6	108.9	109.5		110.5	110.9	111.6	112.3
Materials for food manufacturing	98.4	100.8	105.9	102.6	107.7	108.3		109.9	109.8	111.4	111.5
Flour	94.5	92.9	105.7	96.8	113.1	113.2		114.9	114.3	116.1	113.7
Refined sugar 3/	103.2	106.4	108.6	107.2	112.2	113.7		113.2	114.4	116.1	116.1
Crude vegetable oils	84.8	84.2	116.8	109.0	107.6	108.4		108.9	103.1	109.9	107.4
Crude materials 4/	87.7	93.7	95.9	95.6	94.5	97.0		101.0	101.0	103.1	104.1
Foodstuffs & feedstuffs	93.2	96.2	106.0	101.1	108.0	109.5		112.4	111.0	113.7	111.4
Fruits & vegetables 5/	103.9	106.8	108.1	101.0	119.0	114.7		108.1	122.3	115.6	112.3
Grains	79.2	71.1	97.9	82.3	107.4	108.9		115.2	111.3	115.1	109.8
Livestock	91.8	102.0	103.0	107.7	98.3	101.0		103.9	104.1	106.2	105.9
Poultry, live	129.6	101.2	121.5	97.6	128.0	121.7		122.4	121.5	138.5	138.4
Fibers, plant & animal	88.3	106.4	98.4	103.6	93.1	93.9		95.8	94.8	98.4	105.0
Fluid milk	90.9	91.8	89.1	85.4	96.5	97.0		97.0	95.4	92.3	90.0
Oilseeds	91.4	99.2	134.0	121.5	134.7	137.5		143.6	133.2	140.0	130.7
Tobacco, leaf	89.7	85.7	87.2	82.0	94.4	94.4		93.7	94.4	93.1	93.1
Sugar, raw cane	104.9	110.2	111.9	111.9	110.2	112.0		111.0	111.9	112.3	112.3
All commodities	100.1	102.8	106.9	105.8	108.3	109.0		110.3	110.8	111.5	112.3
Industrial commodities	99.9	102.5	106.3	105.6	107.5	108.1		109.4	110.0	110.6	111.7
All foods 6/	105.5	107.8	111.5	108.8	113.8	114.1		115.6	116.3	117.5	116.8
Farm products & processed foods & feeds	101.2	103.7	110.0	106.4	112.4	112.9		114.8	114.6	116.2	115.1
Farm products	92.9	95.5	104.8	99.2	107.9	108.9		111.4	110.5	113.4	110.5
Processed foods & feeds 6/	105.4	107.9	112.8	110.1	114.8	115.0		116.7	116.8	117.8	117.5
Cereal & bakery products	111.0	112.6	122.9	120.2	126.1	126.5		128.5	129.4	129.1	129.3
Sugar & confectionery	109.6	112.6	114.6	113.3	116.8	117.3		116.9	118.1	118.7	120.0
Beverages	114.5	112.5	114.3	114.1	115.8	115.8		116.0	117.6	118.7	119.4

1/ Commodities ready for sale to ultimate consumer. 2/ Commodities requiring further processing to become finished goods. 3/ All types & sizes of refined sugar. 4/ Products entering market for the first time that have not been manufactured at that point. 5/ Fresh & dried. 6/ Includes all raw, intermediate, & processed foods (excludes soft drinks, alcoholic beverages, & manufactured animal feeds). R = revised.

Information contact: Bureau of Labor Statistics (202) 523-1913.

## Farm-Retail Price Spreads

Table 8.—Farm-Retail Price Spreads

	Annual				1988			1989			
	1985	1986	1987	1988	Apr	Nov	Dec	Jan	Feb	Mar	Apr
<b>Market basket 1/</b>											
Retail cost (1982-84=100)	104.1	106.3	111.6	116.5	114.2	118.9	119.5	121.5	122.3	122.9	123.6
Farm value (1982-84=100)	96.2	94.9	97.1	100.3	95.7	103.9	102.9	105.6	106.5	107.1	106.2
Farm-retail spread (1982-84=100)	108.3	112.5	119.4	125.3	124.2	127.0	128.4	130.0	130.8	131.5	132.9
Farm value-retail cost (%)	32.4	31.2	30.5	30.1	29.3	30.6	30.2	30.5	30.5	30.5	30.1
<b>Meat products</b>											
Retail cost (1982-84=100)	98.9	102.0	109.6	112.2	110.8	113.0	112.7	114.0	114.3	115.5	115.6
Farm value (1982-84=100)	91.3	94.3	101.2	99.5	102.0	97.4	97.7	102.7	102.6	103.7	103.4
Farm-retail spread (1982-84=100)	106.7	109.8	118.3	125.2	119.9	129.0	128.1	125.6	126.3	127.7	128.1
Farm value-retail cost (%)	46.8	46.8	46.7	44.9	46.6	43.7	43.9	45.6	45.5	45.5	45.3
<b>Dairy products</b>											
Retail cost (1982-84=100)	103.2	103.3	105.9	108.4	107.1	110.6	111.4	112.6	113.4	113.8	114.1
Farm value (1982-84=100)	95.2	92.6	93.3	90.4	88.1	96.3	97.3	97.9	97.7	94.3	92.7
Farm-retail spread (1982-84=100)	110.5	113.3	117.5	124.9	124.7	123.8	124.4	126.1	127.9	131.7	133.8
Farm value-retail cost (%)	44.2	43.0	42.3	40.0	39.4	41.8	41.9	41.7	41.3	39.8	39.0
<b>Poultry</b>											
Retail cost (1982-84=100)	106.2	114.2	112.6	120.7	110.2	127.2	127.1	128.8	128.4	130.3	133.0
Farm value (1982-84=100)	105.9	115.1	93.8	110.4	89.6	117.9	114.4	112.8	113.9	124.3	125.9
Farm-retail spread (1982-84=100)	106.6	113.3	134.2	132.6	133.9	137.9	141.7	147.2	145.1	137.3	141.2
Farm value-retail cost (%)	53.3	53.9	44.6	49.0	43.5	49.6	48.2	46.9	47.5	51.0	50.7
<b>Eggs</b>											
Retail cost (1982-84=100)	91.0	97.2	91.5	93.6	85.0	101.2	99.6	112.0	106.1	122.9	117.6
Farm value (1982-84=100)	85.7	92.4	76.8	76.7	61.9	89.2	90.1	96.6	92.3	128.0	99.8
Farm-retail spread (1982-84=100)	100.4	106.0	117.9	123.9	126.5	122.8	116.7	139.7	130.9	113.7	149.5
Farm value-retail cost (%)	60.5	61.0	53.9	52.7	46.8	56.6	58.1	55.4	55.9	66.9	54.5
<b>Cereal &amp; bakery products</b>											
Retail cost (1982-84=100)	107.9	110.9	114.8	122.1	119.8	125.9	126.6	127.9	128.9	129.7	130.6
Farm value (1982-84=100)	94.3	76.3	71.0	92.3	83.9	98.9	101.0	102.0	101.0	103.1	102.5
Farm-retail spread (1982-84=100)	109.8	115.7	120.9	126.3	124.8	129.7	130.2	131.5	132.8	133.4	134.3
Farm value-retail cost (%)	10.7	8.4	7.6	9.3	8.6	9.6	9.8	9.6	9.6	9.7	9.6
<b>Fresh fruits</b>											
Retail cost (1982-84=100)	118.4	120.4	135.6	145.4	141.8	147.6	147.0	150.1	154.3	151.6	151.0
Farm value (1982-84=100)	110.8	103.8	113.9	113.3	91.6	123.1	110.3	105.0	101.5	92.3	84.1
Farm-retail spread (1982-84=100)	121.8	128.0	145.7	160.2	165.0	158.9	164.0	170.9	178.7	179.0	181.9
Farm value-retail cost (%)	29.6	27.4	26.5	24.6	20.4	26.4	23.7	22.1	20.8	19.2	17.6
<b>Fresh vegetables</b>											
Retail costs (1982-84=100)	103.5	107.7	121.6	129.3	127.5	126.7	133.0	141.4	144.4	140.2	144.1
Farm value (1982-84=100)	93.1	90.0	112.0	105.8	103.5	111.4	108.5	120.4	144.5	120.1	140.9
Farm-retail spread (1982-84=100)	108.9	116.8	126.5	141.3	140.0	134.6	145.6	152.2	144.3	150.5	145.7
Farm value-retail cost (%)	30.5	28.4	31.3	27.8	27.5	29.9	27.7	28.9	34.0	29.1	33.2
<b>Processed fruits &amp; vegetables</b>											
Retail cost (1982-84=100)	107.0	105.3	109.0	117.6	116.0	121.9	121.9	123.4	123.7	123.7	124.3
Farm value (1982-84=100)	117.7	101.5	111.1	136.5	131.3	145.0	136.8	137.5	134.4	133.5	131.3
Farm-retail spread (1982-84=100)	103.7	106.4	108.3	111.7	111.2	114.7	117.3	119.0	120.3	120.7	122.1
Farm value-retail costs (%)	26.2	22.9	24.2	27.6	26.9	28.3	26.7	26.5	25.8	25.7	25.1
<b>Fats &amp; oils</b>											
Retail cost (1982-84=100)	108.9	106.5	108.1	113.1	110.3	117.1	118.5	119.6	120.5	120.4	121.6
Farm value (1982-84=100)	104.3	76.2	74.1	103.3	95.7	99.2	101.0	98.9	99.2	103.1	105.4
Farm-retail spread (1982-84=100)	110.6	117.6	120.6	116.7	115.7	123.7	124.9	127.2	128.3	126.8	127.6
Farm value-retail cost (%)	25.8	19.2	18.6	24.6	23.3	22.8	22.9	22.2	22.2	23.0	23.3
	Annual				1988			1989			
	1985	1986	1987	1988	Apr	Nov	Dec	Jan	Feb	Mar	Apr
<b>Beef, Choice</b>											
Retail price 2/ (cts./lb.)	232.6	230.7	242.5	254.7	250.2	260.4	260.0	264.3	265.2	269.5	269.8
Net carcass value 3/ (cts.)	135.2	133.1	145.3	153.9	156.7	156.0	158.1	159.8	160.9	167.4	169.5
Net farm value 4/ (cts.)	126.8	124.4	137.9	147.4	152.4	151.5	154.0	155.8	157.6	163.9	164.3
Farm-retail spread (cts.)	105.8	106.3	104.6	107.3	97.7	108.9	106.0	108.5	107.6	105.6	105.5
Carcass-retail spread 5/ (cts.)	97.4	97.6	97.2	100.8	93.4	104.4	101.9	104.5	104.3	102.1	100.3
Farm-carcass spread 6/ (cts.)	8.4	8.7	7.4	6.5	4.3	4.5	4.1	4.0	3.3	3.5	5.2
Farm value-retail price (%)	55	54	57	58	61	58	59	59	59	61	61
<b>Pork</b>											
Retail price 2/ (cts./lb.)	162.0	178.4	188.4	183.4	182.9	178.0	177.4	181.1	179.3	179.7	179.5
Wholesale value 3/ (cts.)	101.1	110.9	113.0	101.0	102.5	92.2	97.8	94.3	92.7	91.8	88.6
Net farm value 4/ (cts.)	71.4	82.4	82.7	69.4	67.2	58.3	66.0	66.7	65.2	63.3	59.0
Farm-retail spread (cts.)	90.6	96.0	105.7	114.0	115.7	119.7	111.4	114.4	116.1	116.4	120.5
Wholesale-retail spread 5/ (cts.)	60.9	67.5	75.4	82.4	80.4	85.8	79.6	86.8	86.6	87.9	90.9
Farm-wholesale spread 6/ (cts.)	29.7	28.5	30.3	31.6	35.3	33.9	31.8	27.6	27.5	28.5	29.6
Farm value-retail price (%)	44	46	44	38	37	33	37	37	36	35	33

1/ Retail costs are based on indexes of retail prices for domestically produced farm foods from the CPI-U published monthly by the Bureau of Labor Statistics. The farm value is the payment to farmers for quantity of farm product equivalent to retail unit, less allowance for byproduct. Farm values are based on prices at first point of sale & may include marketing charges such as grading & packing for some commodities. The farm-retail spread, the difference between the retail price & the farm value, represents charges for assembling, processing, transporting, distributing these foods. 2/ Estimated weighted average price of retail cuts from pork & choice yield grade 3 beef carcasses. Retail cut prices from BLS. 3/ Value of carcass quantity (beef) & wholesale cuts (pork) equivalent to 1 lb. of retail cuts; beef adjusted for value of fat & bone byproducts. 4/ Market value to producer for quantity of live animal equivalent to 1 lb. of retail cuts minus value of byproducts. 5/ Represents charges for retailing & other marketing services such as fabricating, wholesaling, in-city transportation. 6/ Represents charges made for livestock marketing, processing, & transportation to city where consumed.

Information contacts: Denis Dunham (202) 786-1870, Ron Gustafson (202) 786-1286.

Table 9.—Price Indexes of Food Marketing Costs

(See the June 1989 Issue.)

Information contact: Denis Dunham (202) 786-1870

# Livestock & Products

Table 10.—U.S. Meat Supply & Use

	Beg. stocks	Pro- duc- tion 1/	Im- ports	Total supply	Ex- ports	Ship- ments	Ending stocks	Consumption		Primary market price 3/
								Total	Per capita 2/ Pounds	
Million pounds 4/										
<b>Beef</b>										
1986	420	24,371	2,129	26,919	521	52	412	25,935	78.4	57.75
1987	412	23,566	2,269	26,247	604	52	386	25,205	73.4	64.60
1988 P	386	23,589	2,379	26,354	680	61	422	25,191	72.7	69.54
1989 F	422	23,169	2,200	25,791	800	60	325	24,606	70.4	71-74
<b>Pork</b>										
1986	289	14,063	1,122	15,474	86	132	248	15,008	58.6	51.19
1987	248	14,374	1,195	15,817	109	124	347	15,237	59.1	51.69
1988 P	347	15,684	1,137	17,168	195	135	413	16,425	63.1	43.39
1989 F	413	15,748	1,020	17,181	160	140	400	16,481	62.9	40-43
<b>Veal 5/</b>										
1986	11	524	27	562	5	1	7	550	1.9	60.89
1987	7	429	24	460	7	1	4	449	1.5	78.05
1988 P	4	396	27	427	10	1	5	411	1.4	89.79
1989 F	5	385	0	390	0	1	4	385	1.3	89-92
<b>Lamb &amp; mutton</b>										
1986	13	338	41	392	2	2	13	375	1.4	70.26
1987	13	315	44	372	2	2	8	360	1.3	78.09
1988 P	8	335	51	394	1	1	6	386	1.4	68.84
1989 F	6	337	53	396	1	0	7	388	1.4	65-68
<b>Total red meat</b>										
1986	733	39,296	3,319	43,348	613	187	680	41,868	140.2	--
1987	679	38,684	3,533	42,897	722	179	744	41,251	135.3	--
1988 P	745	40,004	3,594	44,343	886	198	846	42,413	138.6	--
1989 F	846	39,639	3,273	43,758	961	201	736	41,860	136.0	--
<b>Broilers</b>										
1986	27	14,316	0	14,342	566	149	24	13,603	56.3	56.9
1987	24	15,594	0	15,618	752	151	25	14,691	60.2	47.4
1988 P	25	16,180	0	16,205	765	151	36	15,253	62.0	56.3
1989 F	36	17,012	0	17,047	780	140	30	16,097	64.8	61-64
<b>Mature chicken</b>										
1986	144	627	0	771	16	3	163	589	2.4	--
1987	163	650	0	814	15	2	188	608	2.5	--
1988 P	188	638	0	826	26	3	157	641	2.6	--
1989 F	157	628	0	784	20	4	150	610	2.5	--
<b>Turkeys</b>										
1986	150	3,271	0	3,422	27	4	178	3,212	13.3	72.2
1987	178	3,828	0	4,006	33	4	282	3,686	15.1	57.8
1988 P	282	3,968	0	4,250	51	2	250	3,948	16.0	61.3
1989 F	250	4,103	0	4,353	38	4	200	4,111	16.5	70-73
<b>Total poultry</b>										
1986	321	18,215	0	18,535	609	156	365	17,405	72.0	--
1987	365	20,072	0	20,437	800	157	495	18,985	77.8	--
1988 P	495	20,786	0	21,281	843	156	442	19,841	80.6	--
1989 F	442	21,743	0	22,185	838	148	380	20,819	83.8	--
<b>Red meat &amp; poultry</b>										
1986	1,054	57,511	3,319	61,883	1,223	343	1,045	59,273	212.3	--
1987	1,044	58,756	3,532	63,333	1,521	336	1,240	60,229	213.2	--
1988 P	1,240	60,790	3,594	65,624	1,729	354	1,288	62,254	219.2	--
1989 F	1,288	61,382	3,273	65,943	1,799	349	1,116	62,679	219.8	--

1/ Total including farm production for red meats & federally inspected plus nonfederally inspected for poultry.

2/ Retail weight basis. {The beef carcass-to-retail conversion factor was .74 during 1962-85. It was lowered to .73 for 1986 & to .71 for 1987 & later.} 3/ Dollars per cwt for red meat; cents per pound for poultry. Beef: Choice steers, Omaha 1,000-1,100 lb.; pork: barrows and gilts, 7 markets; veal: farm price of calves; lamb & mutton: Choice slaughter lambs, San Angelo; broilers: wholesale 12-city average; turkeys: wholesale NY 8-16 lb. young hens. 4/ Carcass weight for red meats & certified ready-to-cook for poultry. 5/ Beginning 1989 veal trade no longer reported separately. P = Preliminary. F = forecast. -- = not available.

Information contacts: Ron Gustafson, Leland Southard, or Mark Weimar (202) 786-1285.

Table 11.—U.S. Egg Supply & Use

	Beg. stocks	Pro- duc- tion	Im- ports	Total supply	Ex- ports	Ship- ments	Match- ing use	Ending stocks	Consumption		
									Million dozen		
									Total	Per capita	Wholesale price*
1984	9.3	5,708.3	32.0	5,749.7	58.2	27.8	529.7	11.1	5,122.8	259.4	80.9
1985	11.1	5,688.0	12.7	5,711.8	70.6	30.3	548.1	10.7	5,052.0	253.3	66.4
1986	10.7	5,705.0	13.7	5,729.4	101.6	28.0	566.8	10.4	5,022.6	249.4	71.1
1987	10.4	5,802.3	5.6	5,818.3	111.2	25.1	599.1	14.4	5,068.5	249.3	61.6
1988	14.4	5,771.1	5.3	5,790.8	141.8	25.2	604.3	15.2	5,004.3	244.0	62.1
1989 F	15.2	5,601.0	6.4	5,622.6	104.7	24.0	630.0	10.0	4,854.9	234.6	74.77

\* Cartoned grade A large eggs, New York. F = forecast.

Information contact: Maxine Davis (202) 786-1714.

Table 12.—U.S. Milk Supply & Use<sup>1</sup>

	Pro- duc- tion	Commercial				Total commer- cial supply	CCC net re- movals	Commercial			All milk price 2/
		Farm use	Farm market- ings	Beg. stocks	Im- ports			Ending stocks	Disap- pear- ance		
		Billion pounds						\$/cwt			
1981	132.8	2.3	130.5	5.8	2.3	138.5	12.9	5.4	120.3	13.77	
1982	135.5	2.4	133.1	5.4	2.5	141.0	14.3	4.6	122.1	13.61	
1983	139.7	2.4	137.3	4.6	2.6	144.5	16.8	5.2	122.5	13.58	
1984	135.4	2.9	132.5	5.2	2.7	140.5	8.6	4.9	126.9	13.46	
1985	143.1	2.5	140.7	4.9	2.8	148.4	13.2	4.6	130.6	12.75	
1986	143.4	2.4	141.0	4.6	2.7	148.3	10.6	4.2	133.5	12.51	
1987	142.5	2.2	140.3	4.2	2.5	146.9	6.7	4.6	135.6	12.54	
1988 F	145.5	2.2	143.3	4.6	2.4	150.3	8.9	4.3	137.1	12.24	
1989 P	147.5	2.2	145.3	4.3	2.4	152.0	8.8	4.2	139.0	12.65	

1/ Milkfat basis. Totals may not add because of rounding. 2/ Delivered to plants & dealers; does not reflect deductions. F = forecast.

Information contact: Jim Miller (202) 786-1770.

Table 13.—Poultry & Eggs

		Annual			1988			1989			
		1986	1987	1988	Apr	Nov	Dec	Jan	Feb	Mar	Apr
<b>Broilers</b>											
Federally inspected slaughter, certified (mil. lb.)		14,265.6	15,502.5	15,984.0	1,367.3	1,307.1	1,328.4	1,386.0	1,270.1	1,473.4	1,321.3
Wholesale price		56.9	47.4	56.3	48.7	57.1	58.8	58.0	58.1	62.1	63.5
12-city (cts./lb.)		187	186	220	183	259	254	243	243	242	243
Price of grower feed (\$/ton)		3.7	3.7	3.1	3.1	2.7	2.8	2.9	2.9	3.2	3.2
Broiler-feed price ratio 1/		26.6	23.9	24.8	35.5	34.6	35.3	35.9	32.8	32.5	32.4
Stocks beginning of period (mil. lb.)	2/	5,013.3	5,379.2	5,588.7	470.2	437.1	487.5	481.3	442.8	502.5	493.5
Broiler-type chicks hatched (mil.) 2/											
<b>Turkeys</b>											
Federally inspected slaughter, certified (mil. lb.)		3,133	3,717	3,903	331.3	371.7	272.8	254.1	248.1	301.3	264.9
Wholesale price, Eastern U.S., 8-16 lb. young hens (cts./lb.)		72.2	57.8	61.3	46.9	76.0	61.6	59.0	62.2	65.7	68.3
Price of turkey grower feed (\$/ton)		215	213	243	210	264	269	262	264	258	256
Turkey-feed price ratio 1/		4.1	3.9	3.0	2.7	3.6	2.8	2.7	2.9	3.1	3.3
Stocks beginning of period (mil. lb.)		150.2	178.2	282.4	339.0	583.3	303.5	249.7	262.5	263.1	267.3
Poults placed in U.S. (mil.)		225.4	240.4	242.0	24.7	18.4	20.4	23.1	23.7	26.9	26.4
<b>Eggs</b>											
Farm production (mil.)		68,460	69,627	69,253	5,745	5,694	5,824	5,721	5,173	5,774	5,547
Average number of layers (mil.)		278	280	286	277	276	273	272	272	270	267
Rate of lay (eggs per layer on farms)		248	248	251	20.7	20.6	21.3	21.1	19.0	21.4	20.7
Cartoned price, New York, grade A large (cts./doz.) 3/		71.1	61.6	62.1	52.1	65.3	70.7	72.0	71.1	92.7	76.6
Price of laying feed (\$/ton)		174	170	202	176	220	221	217	214	214	211
Egg-feed price ratio 1/		7.0	7.6	5.3	5.2	5.4	5.4	5.9	5.8	7.5	6.2
Stocks first of month shell (mil. doz.)		.72	1.16	1.29	.99	.72	.78	.27	.36	.21	.48
Frozen (mil. doz.)		10.0	9.8	13.1	10.7	15.2	13.6	14.9	14.9	14.4	11.2
Replacement chicks hatched (mil.)		424	428	366	34.7	29.2	27.0	26.6	27.2	32.7	35.9

1/ Pounds of feed equal in value to 1 dozen eggs or 1 lb. of broiler or turkey liveweight. 2/ Placement of broiler chicks is currently reported for 12 States only; henceforth, hatch of broiler-type chicks will be used as a substitute. 3/ Price of cartoned eggs to volume buyers for delivery to retailers. P = preliminary.

Information contact: Maxine Davis (202) 786-1714.

Table 14.—Dairy

	Annual			1988			1989				
	1986	1987	1988	Apr	Nov	Dec	Jan	Feb	Mar	Apr	
Milk prices, Minnesota-Wisconsin, 3.5% fat (\$/cwt) 1/	11.30	11.23	11.03	10.33	12.23	12.27	11.90	11.26	10.98	11.09	
Wholesale prices											
Butter, grade A Chi. (cts./lb.)	144.5	140.2	132.5	131.0	131.2	131.2	131.0	131.0	131.0	131.0	
Am. cheese, Wis. assembly pt. (cts./lb.)	127.3	123.2	123.8	115.1	136.3	136.0	129.1	117.6	117.8	120.4	
Nonfat dry milk (cts./lb.) 2/	80.6	79.3	80.2	73.1	90.1	92.7	93.6	83.6	79.6	81.1	
USDA net removals											
Total milk equiv. (mil. lb.) 3/	10,628.1	6,706.0	8,856.2	1,235.8	217.3	448.7	1,563.2	1,471.6	1,156.5	1,534.4	
Butter (mil. lb.)	287.6	187.3	312.6	42.7	9.2	19.8	73.8	67.0	54.4	70.7	
Am. cheese (mil. lb.)	468.4	282.0	238.1	35.6	2.3	3.8	3.5	8.5	3.0	0	
Nonfat dry milk (mil. lb.)	827.3	559.4	267.5	49.2	0	0	0	0	0	0	
Milk											
Milk prod. 21 States (mil. lb.)	121,433	121,294	123,896	10,605	9,790	10,251	10,465	9,830	10,864	10,780	
Milk per cow (lb.)	13,399	13,955	14,378	1,230	1,140	1,193	1,220	1,148	1,272	1,263	
Number of milk cows (1,000)	9,063	8,692	8,617	8,624	8,585	8,594	8,577	8,562	8,544	8,535	
U.S. milk production (mil. lb.)	143,381	142,557	145,527	6/12,461	6/11,500	6/12,041	6/12,296	6/11,550	6/12,764	6/12,666	
Stock, beginning											
Total (mil. lb.)	13,695	12,867	7,440	8,965	9,125	8,382	8,189	8,927	10,448	10,899	
Commercial (mil. lb.)	4,590	4,165	4,646	5,080	4,535	4,069	4,289	4,673	5,018	4,840	
Government (mil. lb.)	9,105	8,702	2,794	3,885	4,390	4,313	3,900	4,254	5,430	6,059	
Imports, total (mil. lb.) 3/	2,733	2,490	2,394	172	240	235	213	170	181	--	
Commercial disappearance (mil. lb.)	133,498	135,657	137,187	11,163	11,806	11,418	10,373	9,732	11,778	--	
Butter											
Production (mil. lb.)	1,202.4	1,104.1	1,207.5	113.8	95.6	112.0	129.0	124.7	135.7	124.7	
Stocks, beginning (mil. lb.)	205.5	193.0	143.2	221.1	237.3	226.2	214.7	246.6	314.4	341.9	
Commercial disappearance (mil. lb.)	922.9	902.5	909.8	77.8	93.2	94.6	45.5	47.8	86.9	--	
American cheese											
Production (mil. lb.)	2,798.2	2,716.7	2,756.6	248.9	214.5	235.0	225.6	208.7	231.9	236.2	
Stocks, beginning (mil. lb.)	850.2	697.1	370.4	365.4	325.0	282.5	293.0	288.4	293.5	284.6	
Commercial disappearance (mil. lb.)	2,382.8	2,437.1	2,570.0	202.2	238.1	205.6	216.2	189.1	228.5	--	
Other cheese											
Production (mil. lb.)	2,411.1	2,627.7	2,815.0	226.4	244.4	251.5	230.9	210.8	256.5	236.4	
Stocks, beginning (mil. lb.)	94.1	92.0	89.7	89.7	107.4	105.9	104.7	111.4	111.4	110.9	
Commercial disappearance (mil. lb.)	2,684.9	2,880.2	3,034.1	238.3	271.9	278.2	239.3	225.2	274.2	--	
Nonfat dry milk											
Production (mil. lb.)	1,284.1	1,056.8	978.5	106.1	54.3	75.8	87.1	85.6	95.7	99.8	
Stocks, beginning (mil. lb.)	1,011.1	686.8	177.2	151.1	64.3	50.4	53.1	66.3	84.4	88.3	
Commercial disappearance (mil. lb.)	479.1	492.9	733.1	42.5	65.1	69.9	71.9	66.5	91.0	--	
Frozen dessert											
Production (mil. gal.) 4/	1,248.6	1,260.7	1,246.9	105.7	81.4	79.1	80.5	86.6	108.0	104.3	
	Annual			1987			1988				1989
	1986	1987	1988	III	IV	I	II	III	IV	I P	
Milk production (mil. lb.)	143,381	142,557	145,527	35,533	34,811	36,197	37,871	36,025	35,434	36,610	
Milk per cow (lb.)	13,260	13,802	14,213	3,458	3,385	3,519	3,694	3,526	3,471	3,600	
No. of milk cows (1,000)	10,813	10,329	10,239	10,277	10,285	10,286	10,252	10,218	10,208	10,169	
Milk-feed price ratio 5/	1.73	1.83	1.58	1.80	1.89	1.74	1.51	1.66	1.59	1.56	
Returns over concentrate 5/ costs (\$/cwt milk)	9.23	9.52	9.05	9.26	9.97	9.34	8.33	8.53	9.86	9.63	

1/ Manufacturing grade milk. 2/ Prices paid f.o.b. Central States production area, high heat spray process.

3/ Milk equivalent, fat basis. 4/ Ice cream, ice milk, &amp; hard sherbet. 5/ Based on average milk price after adjustment for price support deductions. 6/ Estimated. P = preliminary. -- = not available.

Information contact: Jim Miller (202) 786-1770.

Table 15.—Wool

	Annual			1988			1989			
	1986	1987	1988	Apr	Nov	Dec	Jan	Feb	Mar	Apr P
U.S. wool price, Boston 1/ (cts./lb.)	191	265	438	453	475	450	450	438	410	375
Imported wool price, Boston 2/ (cts./lb.)	201	247	372	441	377	391	432	417	387	363
U.S. mill consumption, scoured										
Apparel wool (1,000 lb.)	126,768	129,677	128,325	10,138	9,127	12,097	10,610	11,074	13,718	10,754
Carpet wool (1,000 lb.)	9,960	13,092	15,825	1,344	971	1,005	800	1,314	1,559	1,595
1/ Wool price delivered at U.S. mills, clean basis, Graded Territory 64's (20.60-22.04 microns) staple 2-3/4" & up.										
2/ Wool price delivered at U.S. mills, clean basis, Australian 60/62's, type 64A (24 micron). Duty since 1982 has been 10.0 cents. P = preliminary.										

Information contact: John Lawler (202) 786-1840.

Table 16.—Meat Animals

	Annual			1988			1989				
	1986	1987	1988	Apr	Nov	Dec	Jan	Feb	Mar	Apr	
Cattle on feed (7 States)											
Number on feed (1,000 head) 1/	7,920	7,643	8,066	7,746	7,934	8,000	7,765	7,700	7,661	8,012	
Placed on feed (1,000 head)	20,035	21,040	20,584	1,521	1,680	1,401	1,711	1,585	1,975	1,534	
Marketings (1,000 head)	19,263	19,410	19,698	1,609	1,507	1,521	1,672	1,509	1,549	1,570	
Other disappearance (1,000 head)	1,049	1,207	1,187	139	107	115	104	115	75	129	
Beef steer-corn price ratio, Omaha 2/	31.0	41.0	31.5	39.3	28.4	27.9	28.2	28.7	29.4	30.1	
Hog-corn price ratio, Omaha 2/	27.8	32.8	19.6	22.5	14.7	16.2	16.4	16.3	15.4	14.8	
Market prices (\$/cwt)											
Slaughter cattle											
Choice steers, Omaha	57.75	64.60	69.54	72.71	70.07	71.21	72.35	72.92	75.75	75.1	
Utility cows, Omaha	37.19	44.83	46.55	49.41	42.10	45.14	44.88	46.92	45.89	45.1	
Choice weavers, S. St. Paul 3/	59.92	78.74	90.23	96.41	230.88	225.63	230.25	225.06	257.50	266.1	
Feeder cattle											
Choice, Kansas City, 600-700 lb.	62.79	75.36	83.67	86.50	83.90	86.13	86.00	85.56	84.45	82.8	
Slaughter hogs											
Barrows & gilts, 7-markets	51.19	51.69	43.39	42.10	36.45	40.58	41.58	40.91	39.85	37.1	
Feeder pigs											
S. Mo. 40-50 lb. (per head)	45.62	46.69	38.88	52.16	27.99	29.17	35.25	34.18	39.55	34.1	
Slaughter sheep & lambs											
Lambs, Choice, San Angelo	69.46	78.09	68.84	76.50	65.55	68.83	68.13	68.83	75.50	78.1	
Ewes, Good, San Angelo	34.78	38.62	38.88	40.17	38.75	42.08	48.13	53.28	47.55	42.1	
Feeder lambs											
Choice, San Angelo	73.14	102.26	90.91	100.25	82.00	84.83	84.38	84.38	95.30	88.1	
Wholesale meat prices, Midwest											
Choice steer beef, 600-700 lb.	88.98	97.21	103.34	105.25	104.73	106.20	107.30	107.98	112.43	113.1	
Canner & cutter cow beef	71.31	83.70	87.77	89.69	85.32	90.03	91.23	96.93	92.17	89.1	
Pork loins, 14-18 lb. 4/	104.78	106.23	97.49	94.03	77.87	93.61	89.35	90.97	91.77	91.1	
Pork bellies, 12-14 lb.	65.82	63.11	41.25	43.13	33.64	34.82	36.91	31.41	30.91	25.1	
Hams, skinned, 14-17 lb.	80.01	80.96	71.03	68.27	78.08	65.50	64.61	67.11	63.00	61.1	
All fresh beef retail price 5/	--	212.64	224.35	219.68	232.94	232.97	234.05	233.94	238.50	237.1	
Commercial slaughter (1,000 head)*											
Cattle	37,288	35,647	35,072	2,783	2,800	2,774	2,789	2,568	2,822	2,644	
Steers	17,516	17,443	17,341	1,448	1,318	1,354	1,327	1,261	1,400	1,336	
Heifers	11,097	10,906	10,755	822	827	816	850	808	840	763	
Cows	7,961	6,610	6,334	462	601	554	561	457	532	493	
Bulls & stags	714	689	642	51	54	49	51	42	50	52	
Calves	3,408	2,815	2,504	177	210	211	203	181	200	158	
Sheep & lambs	5,635	5,199	5,293	405	432	460	428	425	519	409	
Hogs	79,598	81,081	87,738	7,091	8,138	7,946	7,332	6,791	7,763	7,380	
Commercial production (mil. lb.)											
Beef	24,213	23,405	23,419	1,841	1,876	1,872	1,896	1,744	1,889	1,757	
Veal	509	416	387	28	33	32	32	28	31	27	
Lamb & mutton	331	309	329	26	27	29	27	27	33	26	
Pork	13,998	14,312	15,614	1,263	1,463	1,425	1,310	1,204	1,373	1,321	
	Annual			1987			1988			1989	
	1986	1987	1988	IV	I	II	III	IV	I	II	
Cattle on feed (13 States)											
Number on feed (1,000 head) 1/	9,754	9,245	9,769	8,992	9,769	9,385	9,001	8,591	9,408	9,678	
Placed on feed (1,000 head)	23,583	24,894	24,353	6,718	5,824	5,893	5,986	6,650	6,212	--	
Marketings (1,000 head)	22,856	22,991	23,339	5,603	5,823	5,859	6,171	5,486	5,598	7/6,088	
Other disappearance (1,000 head)	1,236	1,379	1,375	338	385	418	225	347	344	--	
Hogs & pigs (10 States) 6/											
Inventory (1,000 head) 1/	41,100	39,690	42,995	43,150	42,995	41,345	44,065	45,000	43,010	41,255	
Breeding (1,000 head) 1/	5,258	5,110	5,510	5,310	5,510	5,520	5,630	5,460	5,315	5,380	
Market (1,000 head) 1/	35,842	34,580	37,485	37,840	37,485	35,825	38,435	39,540	37,695	35,875	
Farrowings (1,000 head)	8,223	8,838	9,316	2,266	2,123	2,578	2,359	2,261	2,094	7/2,449	
Pig crop (1,000 head)	63,835	68,888	71,848	17,572	16,489	20,175	18,007	17,216	16,321	--	

1/ Beginning of period. 2/ Bushels of corn equal in value to 100 pounds live weight. 3/ Per head starting September 1988. 4/ Prior to 1984, 8-14 lb.; 1984 & 1985, 14-17 lb.; beginning 1986, 14-18 lb. 5/ New series estimating the composite price of all beef grades & ground beef sold by retail stores. This new series is in addition to, but does not replace, the series for the retail price of Choice beef that appears in table B. 6/ Quarters are Dec. of preceding year-Feb. (I), Mar.-May (II), June-Aug. (III), and Sept.-Nov. (IV). 7/ Intentions. \*Classes estimated. -- = not available.

Information contacts: Ron Gustafson or Leland Southard (202) 786-1285.

## Crops & Products

Table 17.—Supply & Utilization<sup>1,2</sup>

	Area			Yield	Production	Total supply	Feed and residual	Other domestic use	Exports	Total use	Ending stocks	Farm price \$/		
	Set aside 3/	Planted	Harvested											
	Mil. acres		Bu./acre											
<b>Wheat</b>													\$/bu.	
1984/85	18.3	79.2	66.9	38.8	2,595	4,003	405	749	1,424	2,578	1,425	3.39		
1985/86	18.8	75.6	64.7	37.5	2,425	3,866	279	767	915	1,961	1,905	3.08		
1986/87	20.2	72.1	60.7	34.4	2,092	3,018	413	780	1,004	2,197	1,821	2.42		
1987/88	27.9	69.8	56.0	37.7	2,107	3,945	288	804	1,592	2,684	1,261	2.57		
1988/89*	30.1	65.5	53.2	34.1	1,811	3,096	210	830	1,440	2,480	616	3.74		
1989/90*					2,028	2,665	175	840	1,150	2,165	500	3.80-4.20		
	Mil. acres		Bu./acre											
<b>Rice</b>													\$/cwt	
1984/85	.79	2.83	2.80	6,954	138.8	187.3	--	6/60.5	62.1	122.6	64.7	8.04		
1985/86	1.24	2.51	2.49	5,414	134.9	201.8	--	6/65.8	58.7	124.5	77.3	6.53		
1986/87	1.48	2.38	2.36	5,651	133.4	213.3	--	6/77.7	84.2	151.9	51.4	3.75		
1987/88	1.51	2.36	2.33	5,555	129.6	184.0	--	6/80.4	72.2	152.6	31.4	7.27		
1988/89*	.93	2.93	2.90	5,511	159.5	194.6	--	6/86.2	76.0	162.2	32.4	6.50-7.00		
1989/90*					159.0	195.6	--	6/89.6	77.0	166.6	29.0	6.00-8.00		
	Mil. acres		Bu./acre											
<b>Corn</b>													\$/bu.	
1984/85	3.9	80.5	71.9	106.7	7,674	8,684	4,079	1,091	1,865	7,036	1,648	2.63		
1985/86	5.4	83.4	75.2	118.0	8,877	10,536	4,095	1,160	1,241	6,496	4,040	2.23		
1986/87	13.5	76.7	69.2	119.3	8,250	12,291	4,714	1,192	1,504	7,410	4,882	1.50		
1987/88	25.6	65.7	59.2	119.4	7,072	17,958	4,738	1,229	1,732	7,699	4,359	1.94		
1988/89*	23.6	67.6	58.2	84.6	4,921	9,185	4,000	1,255	2,100	7,355	1,830	2.50-2.60		
1989/90*					7,850	9,683	4,200	1,300	1,950	7,450	2,233	1.65-2.05		
	Mil. acres		Bu./acre											
<b>Sorghum</b>													\$/bu.	
1984/85	.6	17.3	15.4	56.4	866	1,154	539	18	297	854	300	2.32		
1985/86	.9	18.3	16.8	66.8	1,120	1,420	664	28	178	869	551	1.93		
1986/87	3.0	15.3	13.9	67.7	938	1,489	535	12	198	746	743	1.37		
1987/88	5.2	11.8	10.6	69.7	739	1,483	564	25	231	820	663	1.70		
1988/89*	5.8	10.4	9.1	63.8	578	1,240	500	35	300	835	420	2.25-2.35		
1989/90*					700	1,105	525	35	250	810	117	1.55-1.95		
	Mil. acres		Bu./acre											
<b>Barley</b>													\$/bu.	
1984/85	.5	12.0	11.2	53.4	599	799	304	170	77	551	247	2.29		
1985/86	.7	13.2	11.6	51.0	591	848	333	169	22	523	325	1.98		
1986/87	2.1	13.1	12.0	50.8	611	944	298	174	137	608	336	1.61		
1987/88	4.0	11.0	10.1	52.7	530	879	258	174	126	558	321	1.81		
1988/89*	4.8	9.7	7.5	38.6	291	624	200	185	75	460	164	2.82		
1989/90*					450	624	220	185	75	480	144	1.85-2.25		
	Mil. acres		Bu./acre											
<b>Oats</b>													\$/bu.	
1984/85	.1	12.4	8.2	58.0	474	689	433	74	1	509	180	1.67		
1985/86	.1	13.3	8.2	63.7	521	728	460	82	2	544	184	1.23		
1986/87	.6	14.7	6.9	56.3	386	603	395	73	3	471	133	1.21		
1987/88	1.3	18.0	6.9	54.0	374	553	361	79	1	441	112	1.56		
1988/89*	1.2	13.9	5.6	39.1	219	391	201	100	1	302	89	2.62		
1989/90*					420	549	320	110	2	432	117	1.45-1.85		
	Mil. acres		Bu./acre											
<b>Soybeans</b>													\$/bu.	
1984/85	0	67.8	66.1	28.1	1,861	2,037	7/93	1,030	598	1,721	316	5.84		
1985/86	0	63.1	61.6	34.1	2,099	2,415	7/86	1,053	740	1,879	536	5.05		
1986/87	0	60.4	58.3	33.3	1,940	2,476	7/104	1,179	757	2,040	436	4.78		
1987/88	0	58.0	57.0	33.7	1,923	2,359	7/81	1,174	802	2,057	302	5.88		
1988/89*	0	58.9	57.4	26.8	1,539	1,841	7/96	1,070	550	1,716	125	7.35		
1989/90*					1,950	2,075	7/95	1,105	600	1,800	275	4.75-6.25		
	Mil. acres		Bu./acre											
<b>Soybean oil</b>													8/ cts./lb.	
1984/85	--	--	--	--	11,468	12,209	--	9,917	1,660	11,577	632	29.50		
1985/86	--	--	--	--	11,617	12,257	--	10,053	1,257	11,310	947	18.00		
1986/87	--	--	--	--	12,783	13,745	--	10,833	1,187	12,020	1,725	15.40		
1987/88	--	--	--	--	9/ 12,974	14,895	--	10,930	1,873	12,803	2,092	22.65		
1988/89*	--	--	--	--	9/ 11,768	14,060	--	10,500	1,300	11,800	2,260	21.50		
1989/90*					12,270	14,560	--	11,000	1,400	12,400	2,160	19.50-23.50		
	Mil. lbs.													
<b>Soybean meal</b>													1,000 tons	
1984/85	--	--	--	--	24,529	24,784	--	19,480	4,917	24,397	387	125		
1985/86	--	--	--	--	24,951	25,338	--	19,090	6,036	25,126	212	155		
1986/87	--	--	--	--	27,758	27,970	--	20,387	7,343	27,730	240	163		
1987/88	--	--	--	--	28,060	28,300	--	21,276	6,871	28,147	153	222		
1988/89*	--	--	--	--	24,897	25,050	--	19,900	5,250	24,750	300	230		
1989/90*					26,250	26,550	--	20,750	5,500	26,250	300	140-180		
	1,000 tons												10/ \$/ton	

See footnotes at end of table.

Table 17.—Supply & Utilization, continued

	Area				Production 4/	Total supply 4/	Feed and residual	Other domestic use	Exports	Total use	Ending stocks	Farm price 5/
	set aside 3/	Planted	Harvested	Yield								
Mil. acres												
Cotton 11/					Lb./acre					Mil. bales		
1984/85	2.5	11.1	10.6	600	13.0	15.8	--	5.5	6.2	11.8	4.1	58.70
1985/86	3.6	10.7	10.2	630	13.4	17.6	--	6.4	2.0	8.4	9.4	56.50
1986/87	3.4	10.0	8.5	552	9.7	19.1	--	7.4	6.7	14.1	5.0	52.60
1987/88	3.2	10.4	10.0	706	14.8	19.8	--	7.6	6.6	14.2	5.8	64.30
1988/89*	1.6	12.5	11.9	619	15.4	21.2	--	7.4	6.0	13.4	7.9	--
1989/90*					13.5	21.4	--	7.5	7.5	15.0	6.5	--

\*June 12, 1989 Supply and Demand Estimates. 1/ Marketing year beginning June 1 for wheat, barley, & oats, August 1 for cotton & rice, September 1 for soybeans, corn, & sorghum, October 1 for soymeal & soyoil. 2/ Conversion factors: Hectare (ha.) = 2.471 acres, 1 metric ton = 2204.622 pounds, 36.7437 bushels of wheat or soybeans, 39.3679 bushels of corn or sorghum, 45.9296 bushels of barley, 68.8944 bushels of oats, 22.046 cwt of rice, and 4.59 480-pound bales of cotton. 3/ Includes diversion, PLIX, & acreage reduction programs. 4/ Includes imports. 5/ Market average prices do not include an allowance for loans outstanding & Government purchases. 6/ Residual included in domestic use. 7/ Includes seed. 8/ Average of Crude soybean oil, Decatur. 9/ Includes 196 million pounds in imports for 1987/88 & 300 million in 1988/89. 10/ Average of 44 percent, Decatur. 11/ Upland & extra long staple. Stock estimates based on Census Bureau data, resulting in an unaccounted difference between supply & use estimates & changes in ending stocks. -- = not available.

Information contact: Commodity Economics Division, Crops Branch (202) 786-1840.

Table 18.—Food Grains

	Marketing year 1/				1988			1989			
	1984/85	1985/86	1986/87	1987/88	Apr	Dec	Jan	Feb	Mar	Apr	
<b>Wholesale prices</b>											
Wheat, No. 1 HRW, Kansas City (\$/bu.) 2/	3.74	3.28	2.72	2.96	3.14	4.25	4.40	4.37	4.32	4.41	
Wheat, DNS, Minneapolis (\$/bu.) 2/	3.70	3.25	2.62	2.92	3.19	4.20	4.42	4.37	4.46	4.45	
Rice, S.W. La. (\$/cwt) 3/	17.98	16.11	10.25	19.25	24.00	14.10	14.00	14.20	13.80	13.50	
<b>Wheat</b>											
Exports (mil. bu.)	1,424	915	1,004	1,592	156	109	120	134	149	--	
Mill grind (mil. bu.)	676	703	755	753	58	62	63	59	59	--	
Wheat flour production (mil. cwt)	301	314	335	336	26	28	29	27	27	--	
<b>Rice</b>											
Exports (mil. cwt, rough equiv.)	62.1	58.7	84.2	72.2	5.0	9.8	10.0	9.1	6.0	--	
<b>Marketing year 1/</b>											
	1985/86	1986/87	1987/88		Jun-Aug	Sept-Nov	Dec-Feb	Mar-May	Jun-Aug	Sept-Nov	Dec-Feb
<b>Wheat</b>											
Stocks, beginning (mil. bu.)	1,425	1,905	1,821	1,820.9	2,976.5	2,500.6	1,923.5	1,260.8	2,253.6	1,709.9	
Domestic use											
Food (mil. bu.)	674	696	719	179.3	191.1	168.6	180.0	179.2	194.4	168.6	
Seed, feed & residual (mil. bu.) 4/	279	413	288	366.8	76.6	5.0	2.6	283.6	40.4	41.1	
Exports (mil. bu.)	915	1,004	1,592	409.9	308.5	413.1	460.6	363.4	330.1	363.1	

1/ Beginning June 1 for wheat & August 1 for rice. 2/ Ordinary protein. 3/ Long grain, milled basis. 4/ Residual includes feed use. -- = not available.

Information contacts: Ed Allen & Janet Livezey (202) 786-1840.

Table 19.—Cotton

	Marketing year 1/				1988			1989			
	1984/85	1985/86	1986/87	1987/88	Apr	Dec	Jan	Feb	Mar	Apr	
<b>U.S. price, SLM, 1-1/16 in. (cts./lb.) 2/</b>											
60.5	60.0	53.2	63.1	60.1	54.8	55.7	55.4	57.6	61.4		
<b>Northern Europe prices</b>											
Index (cts./lb.) 3/	69.2	48.9	62.0	72.7	64.2	61.3	63.1	63.0	66.0	73.8	
U.S. M 1-3/32 in. (cts./lb.) 4/	73.9	64.8	61.8	76.3	73.3	65.8	67.2	68.1	70.0	74.1	
<b>U.S. mill consumpt. (1,000 bales)</b>											
5,545	6,399	7,452	7,617	610	496	629	595	706	637		
Exports (thou bales)	6,201	1,969	6,684	6,582	571	670	483	738	629	608	
Stocks, beginning (1,000 bales)	2,775	4,102	9,348	5,026	9,870	14,155	15,635	15,170	13,947	12,613	

1/ Beginning August 1. 2/ Average spot market. 3/ Liverpool Outlook (A) index; average of five lowest priced of 11 selected growths. 4/ Memphis territory growths.

Information contact: Bob Skinner (202) 786-1840.

Table 20.—Feed Grains

	Marketing year 1/				1988			1989				1990 Apr
	1984/85	1985/86	1986/87	1987/88	Apr	Dec	Jan	Feb	Mar			
<b>Wholesale prices</b>												
Corn, no. 2 yellow, Chicago (\$/bu.)	2.79	2.35	1.64	2.14	2.03	2.69	2.74	2.72	2.78	2.78	2.72	
Sorghum, no. 2 yellow, Kansas City (\$/cwt)	4.46	3.72	2.73	3.40	3.16	4.23	4.24	4.26	4.32	4.32	4.17	
Barley, feed, Duluth (\$/bu.) 2/	2.09	1.53	1.44	1.78	1.94	2.14	2.24	2.33	2.49	2.49	2.52	
Barley, malting, Minneapolis (\$/bu.)	2.55	2.24	1.89	2.04	2.11	3.82	4.14	4.19	4.33	4.33	4.29	
Exports 3/												
Corn (mil. bu.)	1,865	1,241	1,504	1,732	166.4	173.5	176.0	154.7	202.7	177.4		
Feed grains (mil. metric tons) 4/	56.6	36.6	46.3	52.6	5.2	5.4	5.3	4.8	5.9	5.5		

	Marketing year 1/				1988				1989			
	1984/85	1985/86	1986/87	1987/88	Dec-Feb	Mar-May	Jun-Aug	Sept-Nov	Dec-Feb	Mar-May		
Corn												
Stocks, beginning (mil. bu.)	1,006	1,648	4,040	4,882	9,769	7,635	5,836	4,259	7,072	5,205		
Domestic use												
Feed (mil. bu.)	4,079	4,095	4,714	4,746	1,444	960	839	1,338	1,078	--		
Food, seed, ind. (mil. bu.)	1,091	1,160	1,192	1,224	282	330	323	289	280	--		
Exports (mil. bu.)	1,865	1,241	1,504	1,720	408	514	414	482	510	--		
Total use (mil. bu.)	7,036	6,496	7,410	7,690	2,134	1,804	1,577	2,109	1,868	--		

1/ September 1 for corn & sorghum; June 1 for oats & barley. 2/ Beginning March 1987 reporting point changed from Minneapolis to Duluth. 3/ Excludes products. 4/ Aggregated data for corn, sorghum, oats, & barley. -- not available.

Information contact: James Cole (202) 786-1840.

Table 21.—Fats & Oils

	Marketing year *				1988				1989			
	1984/85	1985/86	1986/87	1987/88	Mar	Nov	Dec	Jan	Feb	Mar		
<b>Soybeans</b>												
Wholesale price, no. 1 yellow, Chicago (\$/bu.)	5.88	5.20	5.03	6.67	6.24	7.57	7.74	7.70	7.45	7.62		
Crushings (mil. bu.)	1,030.5	1,052.8	1,178.8	1,174.5	107.6	101.0	100.7	99.8	85.8	93.5		
Exports (mil. bu.)	598.2	740.7	756.9	801.6	78.4	61.3	69.3	66.6	56.8	67.9		
Stocks, beginning (mil. bu.)	175.7	316.0	536.0	436.0	139.3	136.6	147.4	138.6	131.9	112.0		
<b>Soybean oil</b>												
Wholesale price, crude, Decatur (cts./lb.)	29.52	18.02	15.36	22.92	20.22	21.55	22.16	21.13	21.21	22.11		
Production (mil. lb.)	11,467.9	11,617.3	12,783.1	12,974.5	1,186.9	1,108.5	1,110.4	1,105.8	952.3	1,041.2		
Domestic disap. (mil. lb.)	9,888.5	10,045.9	10,820.2	10,734.1	803.6	741.1	753.7	838.0	687.2	937.8		
Exports (mil. lb.)	1,659.9	1,257.3	1,184.5	1,873.2	279.4	110.6	119.9	104.5	65.8	112.4		
Stocks, beginning (mil. lb.)	720.5	632.5	946.6	1,725.0	2,238.9	2,046.2	2,303.0	2,539.9	2,703.2	2,902.4		
<b>Soybean meal</b>												
Wholesale price, 44% protein, Decatur (\$/ton)	125.46	154.88	162.61	221.90	191.80	248.20	246.00	249.30	234.10	237.10		
Production (1,000 ton)	24,529.3	24,951.3	27,758.8	28,060.2	2,572.8	2,399.4	2,390.0	2,359.8	2,036.3	2,218.8		
Domestic disap. (1,000 ton)	19,481.3	19,117.2	20,387.4	21,275.9	1,649.4	1,962.7	1,737.9	1,723.2	1,570.8	1,615.8		
Exports (1,000 ton)	4,916.5	6,009.3	7,343.0	6,871.0	984.7	409.0	594.1	548.0	512.1	760.9		
Stocks, beginning (1,000 ton)	255.4	386.9	211.7	240.2	304.9	267.8	295.6	353.6	442.3	395.7		
Margarine, wholesale price, Chicago, white (cts./lb.)	55.5	51.2	40.3	40.3	47.2	55.39	55.26	54.63	54.00	55.44		

\* Beginning September 1 for soybeans; October 1 for soymeal & oil; calendar year for margarine.

Information contacts: Roger Hoskin (202) 786-1840, Tom Bickerton (202) 786-1824.

Table 22.—Farm Programs, Price Supports, Participation &amp; Payment Rates

									Participation Rate 3
	Target price	Loan rate	Findley loan rate	Deficiency	Paid land diversion	PIK	Base acres 1/	Program 2/	
				\$/bu.		Percent 4/	Mil. acres		Percent of base
<b>Wheat</b>									
1983/84	4.30	3.65		.65	2.70	95	90.2	15/5/10-30	78/78/
1984/85	4.38	3.30		1.00	2.70	85	94.0	20/10/10-20	60/60/
1985/86	4.38	3.30		1.08	2.70		94.0	20/10/0	73
1986/87 5/	4.38	3.00	2.40	1.98	2.00	1.10	91.0	22.5/2.5/5-10	85/85/
1987/88	4.38	2.85	2.28	1.78			87.6	27.5/0/0	87
1988/89	4.23	2.76	2.21	1.53			84.8	27.5/0/0	83
1989/90	4.10	2.58	2.06	7/.50				10/0/0	77
				\$/cwt					
<b>Rice</b>									
1983/84	11.40	8.14		2.77	2.70	80	3.95	15/5/10-30	98/98/
1984/85	11.90	8.00		5.76			4.16	25/0/0	85
1985/86	11.90	8.00	6/3.16	3.90	3.50		4.23	20/15/0	90
1986/87 5/	11.90	7.20	6/3.82	4.70			4.20	35/0/0	95
1987/88	11.66	6.84	6/5.77	4.82			4.18	35/0/0	95
1988/89	11.15	6.63	6/6.30	1.65			4.20	25/0/0	92
1989/90	10.80	6.50	6/6.50	1..9			4.10	25/0/0	94
				\$/bu.					
<b>Corn</b>									
1983/84	2.86	2.65		0	1.50	80	82.6	10/10/10-30	71/71/
1984/85	3.03	2.55		.43			80.8	10/0/0	54
1985/86	3.03	2.55		.48			84.2	10/0/0	69
1986/87 5/	3.03	2.40	1.92	1.11	.73		81.7	17.5/2.5/0	86
1987/88	3.03	2.28	1.82	1.09	2.00		81.5	20/15/0	90
1988/89	2.93	2.21	1.77	7/.1.10	1.75		82.9	20/10/0; 0/92	90
1989/90	2.84	2.06	1.65	7/.89				10/0/0; 0/92	
				\$/bu.					
<b>Sorghum</b>									
1983/84	2.72	2.52		0	1.50	80	17.6	8/[same]	72/72/
1984/85	2.88	2.42		.46			18.4		42
1985/86	2.88	2.42		.46			19.3		55
1986/87 5/	2.88	2.28	1.82	1.06	.65		19.0		75
1987/88	2.88	2.17	1.74	1.14	1.90		17.4		83/42
1988/89	2.78	2.10	1.68	1.08	1.65		16.8		81
1989/90	2.70	1.96	1.57	7/.90					
				\$/bu.					
<b>Barley</b>									
1983/84	2.60	2.16		.21	1.00		10.2	8/[same]	55/55/
1984/85	2.60	2.08		.26			11.6		44
1985/86	2.60	2.08		.52			13.3		57
1986/87 5/	2.60	1.95	1.56	.99	.57		12.4		72
1987/88	2.60	1.86	1.49	.79	1.60		12.5		84
1988/89	2.51	1.80	1.44	.76	1.40		12.5		78
1989/90	2.43	1.68	1.34	7/.23					
				\$/bu.					
<b>Oats</b>									
1983/84	1.60	1.36		.11	.75		10.1	8/[same]	20/20/
1984/85	1.60	1.31		0			9.8		14
1985/86	1.60	1.31		.29			9.4		14
1986/87 5/	1.60	1.23	.99	.39	.36		9.2		37
1987/88	1.60	1.17	.94	.20	.80		8.4		45
1988/89	1.55	1.13	.90	11/.30			7.9	5/0/0; 0/92	30
1989/90	1.50	1.06	.85					5/0/0; 0/92	
				\$/bu.					
<b>Soybeans 9/</b>									
1983/84		5.02							
1984/85		5.02							
1985/86		5.02							
1986/87 5/		4.77							
1987/88		4.77							
1988/89		4.77							
1989/90 10/									
				Cts./lb.					
<b>Upland cotton</b>									
1983/84	76.0	55.00		12.10	25.00	85	15.2	20/5/10-30	93/93/
1984/85	81.0	55.00		18.60			15.6	25/0/0	70
1985/86	81.0	57.30		23.70	30.00		15.9	20/10/0	82/0/0
1986/87 5/	81.0	55.00	11/44.00	26.00			15.6	25/0/0	93
1987/88	79.4	52.25	12/	17.3			14.7	25/0/0	92
1988/89	75.9	51.80		16.00			14.5	12.5/0/0	88
1989/90	73.4	50.00						25/0/0	

1/ Includes planted area plus acres considered planted (ARP, PLD, O-92, etc). Net of CRP. Revised April 1989. 2/ Percentage of base acres that farmers participating in Acreage Reduction Programs/Paid Land Diversion/PIK were required to devote to conserving uses to receive program benefits. In addition to the percentages shown for 1983/84, farmers had the option of submitting bids to retire their entire base acreages. 3/ Percentage of base acres enrolled in Acreage Reduction Programs/Paid Land Diversion/PIK. 4/ Percent of program yield, except 1986/87 wheat, which is dollars per bushel. 1983 & 1984 PIK rates apply only to the 10-30 and 10-20 portions, respectively. 5/ Rates for payments received in cash were reduced by 4.3 percent in 1985/87 due to Gramm-Rudman-Hollings. 6/ Annual average world market price. 7/ Guaranteed to farmers signed up for O/92. 8/ The sorghum, oats, barley programs were the same as for corn each year except 1983/84, when PIK was not offered on barley & oats, & in 1988 for oats. 9/ There are no target prices, acreage programs, or payment rates for soybeans. 10/ Loan rate is not to be announced prior to August 1, 1989. 11/ Loan repayment rate. 12/ Loans may be repaid at the lower of the loan rate or world market prices.

Information contact: James Cole (202) 786-1840.

Table 23.—Fruit

	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988 F
Citrus 1/												
Production (1,000 ton)	14,255	13,329	16,484	15,105	12,057	13,608	10,792	10,525	11,051	11,905	12,671	13,117
Per capita consumpt. (lbs.) 2/	115.1	107.5	108.4	112.6	104.4	109.3	119.9	102.9	109.1	118.0	114.9	--
Noncitrus 3/												
Production (1,000 tons)	12,274	12,460	13,689	15,152	12,961	14,217	14,154	14,292	14,189	13,917	16,008	15,271
Per capita consumpt. (lbs.) 2/	84.5	83.0	85.7	87.3	88.0	89.0	88.9	93.7	92.3	95.7	101.9	--
	1988						1989					
F.o.b. shipping point prices	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr
Apples (\$/carton) 4/	10.98	14.21	23.87	23.05	20.45	13.80	12.15	12.63	10.78	13.96	12.32	11.25
Pears (\$/box) 5/	15.14	17.50	--	--	--	12.48	12.33	9.70	10.58	10.75	9.73	--
Oranges (\$/box) 6/	8.25	8.42	6.41	4.90	4.17	5.48	5.82	6.50	6.20	6.21	5.27	6.64
Grapefruit (\$/box) 6/	4.53	3.36	4.85	4.09	7.34	7.57	4.77	4.71	3.72	3.34	3.36	3.28
Stocks, ending												
Fresh apples (mil. lbs.)	552.2	248.1	95.0	5.1	1,857.7	4,601.8	3,904.3	3,265.8	2,659.6	2,094.6	1,544.2	1,069.1
Fresh pears (mil. lbs.)	17.9	2.7	--	117.6	434.0	425.7	368.3	295.5	234.6	162.9	115.1	57.7
Frozen fruits (mil. lbs.)	548.5	657.3	864.0	981.4	997.5	1,116.0	1,011.8	937.3	834.5	759.3	671.4	601.7
Frozen orange juice (mf. lbs.)	1,120.1	1,154.7	1,001.8	862.5	693.1	639.7	587.7	721.6	980.9	1,151.1	1,086.8	1,201.8

1/ Crop year beginning with year indicated. 2/ Per capita consumption for total U.S. population, including military consumption of both fresh and processed fruit in fresh weight equivalent. 3/ Calendar year. 4/ Red delicious, Washington, extra fancy, carton tray pack. 5/ D'Anjou, Washington, standard box wrapped, U.S. no. 1, 135's. 6/ U.S. equivalent on-tree returns. F = forecast. -- = not available.

Information contact: Ben Huang (202) 786-1885.

Table 24.—Vegetables

	Calendar year											
	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988		
Production												
Total vegetables (1,000 cwt) 1/	413,925	381,370	379,123	431,515	403,320	457,392	453,769	445,436	466,141	452,731		
Fresh (1,000 cwt) 1/ 2/	190,859	190,228	194,694	207,924	197,919	217,132	217,932	216,267	219,689	225,784		
Processed (tons) 3/	11,153,300	9,557,100	9,221,460	11,179,590	10,270,050	12,013,020	11,791,860	11,616,560	12,222,620	11,347,370		
Mushrooms (1,000 lbs.)	470,069	469,576	517,146	490,826	561,531	595,681	587,956	614,393	631,690	--		
Potatoes (1,000 cwt)	342,447	302,857	338,591	355,131	333,911	362,612	407,109	361,511	385,462	349,973		
Sweetpotatoes (1,000 cwt)	13,370	10,953	12,799	14,833	12,083	12,986	14,853	12,674	12,064	11,832		
Dry edible beans (1,000 cwt)	20,552	26,729	32,751	25,563	15,520	21,070	22,175	22,886	25,909	19,230		
	1988						1989					
Shipments	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar
Fresh (1,000 cwt) 4/	18,927	26,488	36,998	21,631	21,791	15,215	16,475	20,999	16,535	18,041	18,754	20,887
Potatoes (1,000 cwt)	14,970	12,356	12,791	7,461	10,014	9,963	9,958	13,796	9,051	9,284	8,606	10,955
Sweetpotatoes (1,000 cwt)	218	174	127	91	212	262	305	876	460	246	278	441

1/ 1983 data are not comparable with 1984 & 1985. 2/ Estimate reinstated for asparagus with the 1984 crop; all other years also include broccoli, carrots, cauliflower, celery, sweet corn, lettuce, honeydews, onions, & tomatoes. 3/ Estimates reinstated for cucumbers with the 1984 crop; all other years also include snap beans, sweet corn, green peas, & tomatoes. 4/ Includes snap beans, broccoli, cabbage, carrots, cauliflower, celery, sweet corn, cucumbers, eggplant, lettuce, onions, bell peppers, squash, tomatoes, cantaloupes, honeydews, & watermelons. -- = not available.

Information contacts: Shannon Hamm or Cathy Greene (202) 786-1884.

Table 25.—Other Commodities

	Annual					1988				1989	
	1984	1985	1986	1987	1988	Jan-Mar	Apr-June	July-Sept	Oct-Dec	Jan-Mar	
Sugar											
Production 1/	5,890	5,969	6,257	7,309	7,069	2,082	772	642	3,573	1,835	
Deliveries 1/	8,454	8,035	7,786	8,167	8,188	1,951	1,983	2,147	2,107	1,902	
Stocks, ending 1/	3,005	3,126	3,225	3,195	3,117	3,567	2,467	1,316	3,134	3,413	
Coffee											
Composite green price N.Y. (cts./lb.)	142.95	137.46	185.18	109.14	115.59	121.98	121.44	114.20	120.75	126.67	
Imports, green bean equiv. (mil. lbs.) 2/	2,411	2,550	2,596	2,638	2,072	584	422	594	472	565	
	Annual					1988					
Tobacco	1986	1987	1988	Mar	Oct	Nov	Dec	Jan	Feb	Mar	
Prices at auctions 3/											
Flue-cured (\$/lb.)	1.52	1.59	1.61	--	1.71	1.61	--	--	--	--	
Burley (\$/lb.)	1.57	1.56	1.62	--	NQ	1.63	1.62	1.60	1.54	--	
Domestic consumption 4/											
Cigarettes (bill.)	584.0	577.0	543.3	55.3	46.9	56.3	39.5	46.9	41.9	51.7	
Large Cigars (mil.)	3,090	2,760	2,541	223.9	217.4	209.7	203.3	169.3	171.4	217.6	

1/ 1,000 short tons, raw value. Quarterly data shown at end of each quarter. 2/ Net imports of green & processed coffee. 3/ Crop year July-June for flue-cured, Oct.-Sept. for burley. 4/ Taxable removals. P = preliminary.

-- = not available. NQ = no quote.

Information contacts: sugar, Peter Buzzanell (202) 786-1888; coffee, Fred Gray (202) 786-1888; tobacco, Verner Grise (202) 786-1890.

# World Agriculture

Table 26.—World Supply & Utilization of Major Crops, Livestock, & Products

	1983/84	1984/85	1985/86	1986/87	1987/88	1988/89 P	1989/90 F
Million units							
<b>Wheat</b>							
Area (hectares)	228.8	231.0	229.3	228.1	219.9	218.6	
Production (metric tons)	489.3	511.9	500.1	530.7	503.7	501.0	531.1
Exports (metric tons) 1/	102.0	107.0	85.0	90.7	105.5	98.2	97.4
Consumption (metric tons) 2/	474.1	493.0	496.2	522.4	533.5	534.3	535.1
Ending stocks (metric tons) 3/	145.2	164.0	167.9	176.1	146.3	112.9	108.9
<b>Coarse grains</b>							
Area (hectares)	335.1	334.7	341.2	336.8	323.6	326.7	
Production (metric tons)	687.6	815.8	843.3	835.2	792.8	723.6	823.5
Exports (metric tons) 1/	93.4	100.4	83.2	84.1	83.2	97.1	96.9
Consumption (metric tons) 2/	758.8	782.6	779.1	809.5	813.2	801.4	820.1
Ending stocks (metric tons) 3/	110.7	143.9	208.1	233.8	213.5	135.6	138.9
<b>Rice, milled</b>							
Area (hectares)	144.2	144.3	144.9	145.1	141.0	144.2	
Production (metric tons)	307.9	318.8	320.0	318.3	312.6	323.7	325.0
Exports (metric tons) 4/	12.6	11.4	12.6	12.8	11.8	12.9	12.7
Consumption (metric tons) 2/	304.5	310.6	319.7	323.1	320.5	322.0	326.5
Ending stocks (metric tons) 3/	46.6	54.9	54.0	49.2	41.4	43.1	41.6
<b>Total grains</b>							
Area (hectares)	708.1	710.0	715.4	710.0	684.5	689.3	
Production (metric tons)	1,484.8	1,646.5	1,663.4	1,684.2	1,609.1	1,548.3	1,679.6
Exports (metric tons) 1/	208.0	218.8	180.8	187.6	200.5	208.2	205.0
Consumption (metric tons) 2/	1,537.4	1,586.2	1,595.0	1,655.0	1,667.2	1,657.7	1,681.7
Ending stocks (metric tons) 3/	302.5	362.8	430.0	459.1	401.2	291.6	289.4
<b>Oilseeds</b>							
Crush (metric tons)	135.8	150.7	155.1	161.2	166.6	166.8	
Production (metric tons)	165.0	191.1	196.1	194.1	207.6	199.6	215.0
Exports (metric tons)	33.0	33.1	34.6	37.7	39.5	32.7	
Ending stocks (metric tons)	15.7	21.1	26.8	23.4	23.7	17.8	
<b>Meals</b>							
Production (metric tons)	92.5	101.8	105.0	110.3	114.1	112.8	
Exports (metric tons)	29.7	32.3	34.4	36.7	36.3	37.6	
<b>Oils</b>							
Production (metric tons)	42.1	46.2	49.5	50.3	52.8	53.4	
Exports (metric tons)	13.7	15.6	16.4	16.9	17.5	17.3	
<b>Cotton</b>							
Area (hectares)	31.0	33.9	31.9	29.9	32.2	34.3	
Production (bales)	65.6	88.2	79.6	70.4	80.7	84.3	82.5
Exports (bales)	19.2	20.2	20.2	26.0	23.6	24.8	25.5
Consumption (bales)	68.3	70.0	75.8	82.5	83.5	83.8	85.5
Ending stocks (bales)	24.0	42.4	47.2	34.5	32.1	32.5	29.3
	1983	1984	1985	1986	1987	1988	1989 F
<b>Red meat</b>							
Production (metric tons)	97.5	99.6	103.5	106.4	108.8	109.9	110.6
Consumption (metric tons)	95.8	97.6	101.5	105.3	107.1	108.6	109.2
Exports (metric tons) 1/	5.9	5.9	6.2	6.6	6.6	6.7	6.9
<b>Poultry</b>							
Production (metric tons)	24.4	25.2	26.2	27.4	29.2	30.1	31.2
Consumption (metric tons)	24.3	24.8	26.0	27.0	28.8	29.7	30.8
Exports (metric tons) 1/	1.3	1.3	1.2	1.3	1.5	1.5	1.5
<b>Dairy</b>							
Milk production (metric tons)	413.0	413.5	419.1	427.0	427.0	430.5	433.9

1/ Excludes intra-EC trade. 2/ Where stocks data not available (excluding USSR), consumption includes stock changes. 3/ Stocks data are based on differing marketing years & do not represent levels at a given date. Data not available for all countries; includes estimated change in USSR grain stocks but not absolute level. 4/ Calendar year data. 1984 data correspond with 1983/84, etc. P = preliminary. F = forecast.

Information contacts: Frederic Suris (202) 786-1824; red meat & poultry, Linda Bailey (202) 786-1286; dairy, Sara Short (202) 786-1769.

## U.S. Agricultural Trade

Table 27.—Prices of Principal U.S. Agricultural Trade Products

	Annual			1988			1989			
	1986	1987	1988	Apr	Nov	Dec	Jan	Feb	Mar	Apr
Export commodities										
Wheat, f.o.b. vessel, Gulf ports (\$/bu.)	3.19	3.11	3.97	3.47	4.48	4.55	4.75	4.70	4.88	4.79
Corn, f.o.b. vessel, Gulf ports (\$/bu.)	2.27	1.95	2.73	2.30	2.90	3.00	3.03	3.00	3.03	2.95
Grain sorghum, f.o.b. vessel, Gulf ports (\$/bu.)	2.16	1.88	2.52	2.09	2.61	2.79	2.81	2.81	2.83	2.76
Soybeans, f.o.b. vessel, Gulf ports (\$/bu.)	5.45	5.55	7.81	6.92	7.84	8.07	8.09	7.89	8.05	7.61
Soybean oil, Decatur (cts./lb.)	16.36	15.85	23.52	21.49	21.31	21.75	20.98	21.02	22.02	21.88
Soybean meal, Decatur (\$/ton)	157.62	175.57	234.75	199.98	248.95	246.48	248.76	234.18	235.70	220.90
Cotton, 8-market avg. spot (cts./lb.)	53.47	64.35	57.25	60.07	54.40	54.85	55.67	55.39	57.60	61.43
Tobacco, avg. price at auction (cts./lb.)	153.96	144.34	148.28	141.34	162.15	162.38	162.27	159.74	159.74	160.43
Rice, f.o.b. mill, Houston (\$/cwt.)	14.60	13.15	19.60	24.00	15.00	15.00	15.00	15.00	15.00	15.00
Inedible tallow, Chicago (cts./lb.)	9.03	13.79	16.64	16.17	14.18	16.33	14.90	16.00	14.86	14.60
Import commodities										
Coffee, N.Y. spot (\$/lb.)	2.01	1.09	1.21	1.23	1.17	1.31	1.46	1.31	1.28	1.33
Rubber, N.Y. spot (cts./lb.)	42.87	50.65	59.20	55.68	52.98	54.13	55.95	59.34	56.69	55.23
Cocoa beans, N.Y. (\$/lb.)	.88	.87	.69	.71	.64	.66	.64	.68	.64	.58

Information contact: Mary Teymourian (202) 786-1820.

Table 28.—Indexes of Real Trade-Weighted Dollar Exchange Rates<sup>1</sup>

	1988												1989	
	June	July	Aug	Sept	Oct	Nov	Dec P	Jan P	Feb P	Mar P	Apr P	May P		
	1980=100													
Total U.S. trade <sup>2/</sup>	103.6	108.4	110.5	110.5	107.6	103.5	103.3	106.9	107.9	109.2	109.5	114.0		
Agricultural trade														
U.S. markets	102.9	105.5	106.1	107.4	104.8	101.9	101.5	103.2	103.4	103.5	102.9	104.6		
U.S. competitors	125.1	126.6	128.1	128.1	126.3	123.8	123.0	123.8	124.6	121.5	118.5	117.5		
Wheat														
U.S. markets	113.3	115.5	115.7	118.8	116.5	114.6	114.6	117.1	116.9	113.8	110.7	109.7		
U.S. competitors	119.2	119.7	120.7	119.7	116.6	114.2	112.6	113.3	113.9	115.4	115.3	117.6		
Soybeans														
U.S. markets	99.4	103.3	104.5	104.5	101.9	98.1	97.9	100.6	101.1	102.0	102.1	105.1		
U.S. competitors	190.4	186.3	185.9	174.7	169.2	167.5	164.7	162.6	161.3	153.8	149.9	149.6		
Corn														
U.S. markets	90.5	93.4	93.6	94.1	91.4	88.2	87.6	89.0	89.1	89.6	89.3	90.9		
U.S. competitors	169.6	170.7	171.6	164.8	159.3	155.0	153.6	156.8	157.8	158.2	158.3	161.4		
Cotton														
U.S. markets	98.8	101.3	101.8	102.1	100.0	96.9	96.4	97.9	97.9	98.4	98.3	99.8		
U.S. competitors	101.0	100.7	99.5	101.8	99.1	97.1	95.8	95.2	94.2	95.2	93.0	91.9		

<sup>1</sup>/ Real indexes adjust nominal exchange rates for differences in rates of inflation, to avoid the distortion caused by high-inflation countries. A higher value means the dollar has appreciated. See the October 1988 issue of Agricultural Outlook for a discussion of the calculations and the weights used. <sup>2/</sup> Federal Reserve Board Index of trade-weighted value of the U.S. dollar against 10 major currencies. Weights are based on relative importance in world financial markets.  
P = preliminary.

Information contact: Tim Baxter, David Stallings (202) 786-1706.

Table 29.—Trade Balance

	Fiscal year 1/										Mar 1989
	1981	1982	1983	1984	1985	1986	1987	1988	1989 F		
\$ million											
Exports											
Agricultural	43,780	39,097	34,769	38,027	31,201	26,309	27,876	35,334	39,000	4,054	
Nonagricultural	185,423	176,308	159,373	170,014	179,236	176,628	202,911	259,013	--	27,077	
Total 2/	229,203	215,405	194,142	208,041	210,437	202,937	230,787	294,347	--	33,131	
Imports											
Agricultural	17,218	15,485	16,373	18,916	19,740	20,875	20,650	21,011	21,000	1,983	
Nonagricultural	237,469	233,349	230,527	297,736	313,722	342,855	367,374	409,141	--	38,164	
Total 3/	254,687	248,834	246,900	316,652	333,462	363,730	388,024	430,152	--	40,147	
Trade balance											
Agricultural	26,562	23,612	18,396	19,111	11,461	5,434	7,226	14,323	18,000	2,071	
Nonagricultural	-52,046	-57,041	-71,154	-127,722	-134,486	-166,227	-164,463	-150,128	--	-9,087	
Total	-25,484	-33,429	-52,758	-108,611	-123,025	-160,793	-157,237	-135,805	--	-7,016	

<sup>1</sup>/ Fiscal years begin October 1 & end September 30. Fiscal year 1988 began Oct. 1, 1987 & ended Sept. 30, 1988.

<sup>2</sup>/ Domestic exports including Department of Defense shipments (F.A.S. value). <sup>3/</sup> Imports for consumption (customs value).

f = forecast. -- = not available.

Information contact: Stephen MacDonald (202) 786-1822.

Table 30.—U.S. Agricultural Exports &amp; Imports

	Fiscal year*				Mar 1989	\$ million	Fiscal year*				Mar 1989		
	1986	1987	1988	1989 F			1986	1987	1988	1989 F			
	1,000 units						\$ million						
<b>EXPORTS</b>													
Animals, live (no.) 1/	570	275	1,082	--	75	344	331	452	--	22			
Meats & preps., excl. poultry (mt)	451	548	631	2/600	81	1,012	1,300	1,797	--	225			
Dairy products (mt)	480	445	388	--	57	431	491	536	500	36			
Poultry meats (mt)	265	376	390	400	41	282	406	424	--	44			
Fats, oils, & greases (mt)	1,355	1,220	1,362	3/1,400	124	477	417	545	--	68			
Hides & skins incl. furskins	--	--	--	--	--	1,440	1,666	1,838	--	159			
Cattle hides, whole (no.) 1/	25,596	24,333	23,282	--	2,527	1,131	1,254	1,457	--	121			
Mink pelts (no.) 1/	2,697	2,760	2,455	--	393	65	103	88	--	12			
Grains & feeds (mt)	74,358	90,211	108,905	--	11,534	9,472	9,059	12,581	4/16,300	1,719			
Wheat (mt)	25,501	28,204	40,501	37,000	3,860	3,260	2,877	4,467	5/6,200	623			
Wheat flour (mt)	1,094	1,305	1,046	1,300	135	203	207	171	--	29			
Rice (mt)	2,382	2,454	2,173	2,400	318	648	551	731	800	92			
Feed grains, incl. products (mt)	36,236	47,606	53,308	62,500	6,024	3,817	3,752	5,209	7,500	734			
Feeds & fodders (mt)	8,392	10,113	11,233	6/11,000	1,110	1,286	1,455	1,719	--	199			
Other grain products (mt)	1,015	755	908	--	135	332	285	361	--	55			
Fruits, nuts, and preps. (mt)	2,003	2,146	2,409	--	226	1,766	2,050	2,368	--	189			
Fruit juices incl.													
froz. (1,000 hectoliters) 1/	3,652	4,364	5,497	--	403	148	185	252	--	23			
Vegetables & preps. (mt)	1,442	1,629	1,826	--	224	997	1,176	1,282	--	149			
Tobacco, unmanufactured (mt)	224	224	229	200	26	1,318	1,203	1,296	1,300	159			
Cotton, excl. linters (mt)	482	1,306	1,388	1,400	137	678	1,419	2,136	2,000	193			
Seeds (mt)	269	305	286	--	49	367	371	415	400	51			
Sugar, cane or beet (mt)	375	582	318	--	28	75	113	98	--	10			
Oilseeds & products (mt)	27,583	29,725	29,471	--	2,746	6,271	6,308	7,700	6,800	844			
Oilseeds (mt)	20,684	21,905	21,366	--	1,914	4,394	4,423	5,238	--	565			
Soybeans (mt)	20,139	21,394	20,908	15,400	1,819	4,176	4,205	5,008	4,300	531			
Protein meal (mt)	5,614	6,786	6,406	4,500	703	1,132	1,347	1,502	1,300	193			
Vegetable oils (mt)	1,284	1,035	1,699	--	129	746	538	961	--	85			
Essential oils (mt)	7	8	9	--	1	105	111	120	--	16			
Other	568	565	668	--	54	1,126	1,273	1,495	--	165			
Total	109,862	129,290	148,280	145,000	15,328	26,309	27,876	35,334	38,000	4,054			
<b>IMPORTS</b>													
Animals, live (no.) 1/	1,885	1,994	2,238	--	320	637	610	729	700	82			
Meats & preps., excl. poultry (mt)	1,139	1,282	1,280	--	96	2,248	2,797	2,788	--	208			
Beef & veal (mt)	693	778	779	725	58	1,252	1,575	1,681	1,600	131			
Pork (mt)	406	462	456	410	33	900	1,125	1,001	900	66			
Dairy products (mt)	400	461	337	355	21	786	849	881	800	59			
Poultry & products 1/	--	--	--	--	--	101	112	97	--	10			
Fats, oils, & greases (mt)	22	21	20	--	1	17	18	19	--	1			
Hides & skins, incl. furskins 1/	--	--	--	--	--	200	304	247	--	27			
Wool, unmanufactured (mt)	53	60	56	--	6	160	201	292	--	26			
Grains & feeds (mt)	2,311	2,336	3,050	3,300	330	668	727	868	1,000	112			
Fruits, nuts, & preps., excl. juices (mt)	4,637	4,840	4,797	4,795	514	1,976	2,179	2,169	--	230			
Bananas & plantains (mt)	3,042	3,106	3,030	2,950	257	740	817	820	800	75			
Fruit juices (1,000 hectoliters) 1/	31,539	34,059	26,754	27,000	1,845	698	728	767	--	49			
Vegetables & preps. (mt)	2,199	2,446	2,521	2,550	379	1,560	1,509	1,593	1,700	235			
Tobacco, unmanufactured (mt)	208	225	217	200	12	606	634	611	500	39			
Cotton, unmanufactured (mt)	41	38	36	--	1	14	7	9	--	7/			
Seeds (mt)	89	133	143	170	35	111	156	153	200	26			
Nursery stock & cut flowers 1/	--	--	--	--	--	353	389	419	--	45			
Sugar, cane or beet (mt)	1,905	1,492	1,069	--	152	654	497	368	--	49			
Oilseeds & products (mt)	1,508	1,572	1,772	1,865	161	639	579	838	900	83			
Oilseeds (mt)	197	165	208	--	28	69	56	71	--	11			
Protein meal (mt)	138	245	253	--	29	15	30	42	--	5			
Vegetable oils (mt)	1,173	1,162	1,311	--	104	555	493	725	--	67			
Beverages excl. fruit juices (1,000 hectoliters) 1/	15,488	15,547	15,583	--	1,040	1,848	1,923	2,008	--	138			
Coffee, tea, cocoa, spices (mt)	1,940	1,915	1,842	--	163	6,099	4,868	4,274	--	348			
Coffee, incl. products (mt)	1,223	1,206	1,050	1,000	86	4,400	3,233	2,600	2,800	201			
Cocoa beans & products (mt)	507	503	562	530	56	1,189	1,087	1,164	1,000	103			
Rubber & allied gums (mt)	801	824	846	875	105	615	714	949	1,000	121			
Other	--	--	--	--	--	885	868	931	--	94			
Total	--	--	--	--	--	20,875	20,650	21,011	21,000	1,983			

\*Fiscal years begin Oct. 1 & end Sept. 30. Fiscal year 1988 began Oct. 1, 1987 & ended Sept. 30, 1988. 1/ Not included in total volume. 2/ Forecasts for footnoted items 2/ 6/ are based on slightly different groups of commodities. Fiscal 1988 exports of categories used in the 1989 forecasts were 2/ 561,000 m. tons. 3/ 1.347 million dollars. 4/ 12,743 million. 5/ 4,638 million, i.e. includes flour. 6/ 11.095 million m. tons. 7/ Less than \$500. F = forecast. -- = not available.

Information contact: Stephen MacDonald (202) 786-1822.

Table 31.—U.S. Agricultural Exports by Region

Region & country	Fiscal year*					Mar 1989	Change from year* earlier					Mar 1989
	1986	1987	1988	1989 F	1989		1986	1987	1988	1989 F		
	\$ million						Percent					
Western Europe	6,848	7,219	8,029	7,400	790	-5	5	11	-7	-9		
European Community (EC-12)	6,432	6,787	7,513	6,900	740	-4	5	11	-8	-9		
Belgium-Luxembourg	361	423	429	--	51	-23	17	1	--	63		
France	431	495	565	--	60	-9	15	14	--	-10		
Germany, Fed. Rep.	1,001	1,266	1,306	--	81	11	26	3	--	-42		
Italy	693	733	713	--	50	2	6	-3	--	-42		
Netherlands	2,042	1,954	2,087	--	225	6	-4	7	--	-7		
United Kingdom	628	666	819	--	70	0	6	23	--	16		
Portugal	308	271	340	--	48	-39	-12	25	--	1		
Spain, incl. Canary Islands	723	658	848	--	117	-13	-9	29	--	20		
Other Western Europe	415	432	516	500	50	-19	4	20	0	-12		
Switzerland	128	145	191	--	17	-45	13	32	--	-37		
Eastern Europe	447	453	559	400	58	-16	1	23	-33	-23		
German Dem. Rep.	52	66	67	--	0	-36	27	0	--	0		
Poland	42	63	167	--	4	-66	50	165	--	-67		
Yugoslavia	134	131	104	--	24	-2	-2	-21	--	84		
Romania	112	115	93	--	11	27	3	-19	--	-36		
USSR	1,105	659	1,934	3,400	526	-56	-40	193	79	96		
Asia	10,494	11,990	15,928	18,400	1,844	-12	14	33	16	29		
West Asia (Mideast)	1,243	1,864	1,903	2,100	185	-14	34	14	11	13		
Turkey	111	117	120	--	15	-13	5	3	--	-4		
Iraq	335	528	735	900	61	-10	58	39	29	-20		
Israel	255	264	334	--	23	-15	-4	37	--	15		
Saudi Arabia	335	489	464	400	41	-12	46	-5	-13	11		
South Asia	517	345	805	--	106	-14	-33	133	--	39		
Bangladesh	94	111	107	--	21	-54	18	-3	--	1,104		
India	90	93	354	--	14	-30	3	281	--	-58		
Pakistan	285	98	276	500	62	25	-66	181	67	115		
China	83	235	613	1,400	163	-65	183	161	133	470		
Japan	5,139	5,554	7,274	7,900	826	-9	8	31	8	25		
Southeast Asia	724	708	1,015	--	89	-14	-2	43	--	-18		
Indonesia	172	152	238	--	11	-16	-12	56	--	-66		
Philippines	269	259	345	400	42	-6	-4	33	33	32		
Other East Asia	2,788	3,485	4,318	4,700	474	-11	25	24	9	21		
Taiwan	1,109	1,354	1,577	1,600	159	-17	22	16	0	34		
Korea, Rep.	1,277	1,693	2,250	2,500	260	-9	33	33	11	13		
Hong Kong	400	436	488	600	55	1	9	12	20	32		
Africa	2,134	1,784	2,272	2,400	164	-16	-16	27	6	-5		
North Africa	1,401	1,279	1,659	1,800	125	16	-9	30	8	-2		
Morocco	159	196	193	--	6	2	23	-2	--	-67		
Algeria	329	244	537	700	37	50	-26	120	30	-38		
Egypt	875	761	786	900	75	14	-13	3	15	120		
Sub-Saharan	733	505	613	600	38	-44	-31	21	0	-15		
Nigeria	158	67	44	--	1	-57	-58	-35	--	-63		
Rep. S. Africa	70	49	85	--	11	-63	-30	74	--	41		
Latin America & Caribbean	3,598	3,765	4,401	4,800	452	-21	5	17	9	29		
Brazil	445	418	176	100	2	-20	-6	-58	-50	-44		
Caribbean Islands	752	829	867	--	89	-2	10	5	--	15		
Central America	334	377	413	--	47	-7	13	10	--	56		
Colombia	137	115	178	--	6	-42	-16	55	--	-61		
Mexico	1,114	1,215	1,726	2,100	236	-29	9	42	24	76		
Peru	108	140	174	--	5	2	30	24	--	-56		
Venezuela	493	459	597	600	32	-32	-7	30	0	-42		
Canada	1,466	1,776	1,973	2,000	197	-15	21	11	0	16		
Oceania	216	230	238	200	22	6	6	3	0	61		
Total	26,309	27,876	35,334	39,000	4,054	-16	6	27	10	21		
Developed countries	13,954	15,031	17,883	17,900	1,865	-8	8	19	0	7		
Less developed countries	10,719	11,498	14,346	15,900	1,441	-15	7	25	11	16		
Centrally planned countries	1,636	1,347	3,106	5,200	747	-50	-18	131	68	100		

\*Fiscal years begin Oct. 1 & end Sept. 30. Fiscal year 1988 began Oct. 1, 1987 & ended Sept. 30, 1988. F = forecast.

-- = not available.

Note: Adjusted for transshipments through Canada.

Information contact: Stephen MacDonald (202) 786-1822.

Table 32.—Farm Income Statistics

	Calendar year											
	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988 F	1989 F	
\$ billion												
1. Farm receipts	133.8	142.0	144.1	147.1	141.1	146.8	149.1	140.2	143.7	157	161 to 170	
Crops (incl. net CCC loans)	62.3	71.7	72.5	72.3	67.1	69.5	74.2	63.6	61.9	72	72 to 76	
Livestock	69.2	68.0	69.2	70.3	69.4	73.0	69.8	71.5	76.2	78	79 to 82	
Farm related 1/	2.2	2.3	2.5	4.5	4.5	4.4	5.0	5.1	5.6	6	5 to 7	
2. Direct Government payments	1.4	1.3	1.9	3.5	9.3	8.4	7.7	11.8	16.8	14	10 to 12	
Cash payments	1.4	1.3	1.9	3.5	6.1	4.0	7.6	8.1	6.7	8	7 to 11	
Value of PPI commodities	0.0	0.0	0.0	0.0	5.2	4.5	0.1	3.7	10.1	7	1 to 2	
3. Total gross farm income (4+5+6) 2/	150.7	149.3	166.4	163.5	153.1	174.9	166.1	159.8	169.8	177	185 to 190	
4. Gross cash income (1+2)	135.1	143.3	146.0	150.6	150.4	155.2	156.7	152.0	160.5	170	168 to 173	
5. Nonmoney income 3/	10.6	12.3	13.8	14.3	13.5	13.4	11.8	10.6	10.0	11	8 to 10	
6. Value of inventory change	5.0	-6.3	6.5	-1.4	-10.9	6.3	-2.4	-2.8	-6	-4	4 to 7	
7. Cash expenses 4/	101.7	109.1	113.2	112.8	113.5	116.6	110.2	100.6	103.3	113	115 to 119	
8. Total expenses	123.3	133.1	139.4	140.0	140.4	142.7	134.0	122.3	123.5	133	136 to 140	
9. Net cash income (4-7)	33.4	34.2	32.8	37.8	36.9	38.7	46.6	51.4	57.1	58	50 to 55	
10. Net farm income (3-8)	27.4	16.1	26.9	23.5	12.7	32.3	32.2	37.4	46.3	44	47 to 52	
Deflated (1982\$)	34.9	18.8	28.6	23.5	12.2	30.0	28.9	32.8	39.5	36	39 to 43	
11. Off-farm income	33.8	34.7	35.8	36.4	37.0	38.9	42.6	44.6	46.8	49	48 to 51	
12. Loan Changes 5/: Real estate	13.0	9.9	9.1	3.8	2.3	-1.1	-6.0	-9.2	-7.7	-5	0 to 3	
13.       5/: Non-real estate	11.2	5.3	6.5	3.4	0.9	-0.8	-9.6	-10.7	-4.9	1	2 to 3	
14. Rental income plus monetary change	6.3	6.1	6.4	6.3	5.3	8.9	8.8	7.8	6.8	9	7 to 9	
15. Capital expenditures 5/	20.1	18.0	16.8	13.3	12.7	12.5	9.6	8.6	9.8	11	10 to 12	
16. Net cash flow (9+12+13+14-15)	43.8	37.6	37.8	38.1	32.7	33.2	30.2	30.7	41.5	53	50 to 56	

1/ Income from machine hire, custom work, sales of forest products, & other miscellaneous cash sources. 2/ Numbers in parentheses indicate the combination of items required to calculate a given item. 3/ Value of home consumption of self-produced food & imputed gross rental value of farm dwellings. 4/ Excludes capital consumption, perquisites to hired labor, & farm household expenses. 5/ Excludes farm households. Totals may not add because of rounding. F = forecast.

Information contact: Andy Bernat (202) 786-1808.

Table 33.—Balance Sheet of the U.S. Farming Sector

	Calendar year 1/											
	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988 F	1989 F	
\$ billion												
<b>Assets</b>												
Real estate	706.2	782.9	784.7	748.8	739.6	639.6	558.6	510.1	522.6	551	587 to 597	
Non-real estate	201.6	213.2	212.0	212.4	205.7	208.9	190.4	181.5	186.6	200	196 to 202	
Livestock & poultry	61.4	60.6	53.5	53.0	49.7	49.6	46.3	47.6	57.9	66	65 to 69	
Machinery & motor vehicles	85.8	93.1	101.4	102.0	100.8	96.9	87.6	80.3	73.9	74	74 to 78	
Crops stored 2/	29.2	33.0	29.1	27.9	23.9	29.6	23.5	19.1	20.5	25	18 to 22	
Financial assets	25.3	26.5	28.0	29.5	31.3	32.8	33.0	34.4	34.3	35	35 to 37	
Total farm assets	907.8	996.1	996.7	961.2	945.3	848.5	749.0	691.6	709.2	751	785 to 795	
<b>Liabilities</b>												
Real estate debt 3/	79.7	89.6	98.7	102.5	104.8	103.7	97.7	88.5	80.8	76	75 to 79	
Non-real estate debt 4/	71.8	77.1	83.6	87.0	87.9	87.1	77.5	66.8	61.9	62	60 to 64	
Total farm debt	151.6	166.8	182.3	189.5	192.7	190.8	175.2	155.3	142.7	138	134 to 142	
Total farm equity	756.2	829.3	814.4	771.7	752.6	657.7	573.8	536.3	566.5	613	648 to 658	
<b>Selected ratios</b>												
Debt-to-assets	16.7	16.7	18.3	19.7	20.4	22.5	23.4	22.5	20.1	18.4	17 to 18	
Debt-to-equity	20.0	20.1	22.4	24.6	25.6	29.0	30.5	29.0	25.2	22.5	21 to 22	
Debt-to-net cash income 4/	488	556	497	523	493	376	302	250	236	254	254 to 264	

1/ As of Dec. 31. 2/ Non-CCC crops held on farms plus value above loan rates for crops held under CCC. 3/ Excludes debt on operator dwellings, but includes CCC storage and drying facilities loans. 4/ Excludes debt for nonfarm purposes. F = forecast.

Information contacts: Ken Erickson or Jim Ryan (202) 786-1798.

Table 34.—Cash Receipts from Farm Marketings, by State

Region & State	Livestock & products				Crops 1/				Total 1/			
	1987	1988	Feb 1989	Mar 1989	1987	1988	Feb 1989	Mar 1989	1987	1988	Feb 1989	Mar 1989
	\$ million 2/											
North Atlantic												
Maine	243	216	18	20	170	212	29	37	413	428	47	57
New Hampshire	66	60	5	5	38	77	5	7	104	137	11	12
Vermont	377	352	29	32	35	53	3	4	412	405	31	35
Massachusetts	124	105	8	9	268	298	11	16	393	403	20	25
Rhode Island	12	13	1	1	63	66	3	4	75	79	4	6
Connecticut	196	180	15	16	170	202	11	17	366	382	26	32
New York	1,800	1,781	143	159	726	847	47	57	2,527	2,628	189	216
New Jersey	140	192	15	16	423	451	19	28	563	643	34	45
Pennsylvania	2,319	2,348	195	229	905	939	76	86	3,224	3,287	271	315
North Central												
Ohio	1,614	1,604	136	143	1,808	2,030	106	105	3,422	3,634	241	248
Indiana	1,856	1,749	138	153	2,016	2,368	189	150	3,872	4,118	327	303
Illinois	2,262	2,243	160	161	3,913	4,216	434	297	6,174	6,459	594	458
Michigan	1,285	1,206	97	109	1,219	1,503	87	98	2,506	2,709	184	206
Wisconsin	4,222	4,281	337	362	795	814	49	55	5,017	5,095	386	416
Minnesota	3,645	3,364	271	290	2,165	2,852	144	177	5,809	6,217	415	467
Iowa	5,270	5,045	446	387	3,510	4,029	239	270	8,780	9,074	685	656
Missouri	2,173	2,011	158	177	1,517	1,821	115	112	3,691	3,833	274	288
North Dakota	760	849	104	85	1,548	1,621	79	107	2,308	2,471	183	193
South Dakota	1,910	1,965	174	142	813	946	47	51	2,723	2,911	221	194
Nebraska	4,848	5,336	497	382	1,975	2,639	195	205	6,823	7,975	692	587
Kansas	3,914	4,264	382	399	1,807	2,328	120	114	5,722	6,593	502	513
Southern												
Delaware	370	444	42	42	114	154	7	7	485	598	49	49
Maryland	734	768	71	72	394	458	23	28	1,128	1,226	94	99
Virginia	1,244	1,294	94	104	448	595	24	25	1,692	1,889	119	128
West Virginia	169	179	12	15	52	70	5	4	221	248	17	19
North Carolina	2,081	2,174	172	210	1,634	1,999	48	55	3,715	4,172	220	265
South Carolina	461	488	30	34	470	590	15	18	931	1,078	45	52
Georgia	1,826	2,011	177	149	1,261	1,553	47	62	3,087	3,564	225	211
Florida	1,102	1,114	82	84	4,125	4,589	560	425	5,227	5,703	641	509
Kentucky	1,506	1,538	89	101	913	992	78	40	2,419	2,530	167	141
Tennessee	1,107	1,080	86	93	826	965	35	38	1,933	2,046	121	131
Alabama	1,560	1,695	140	173	588	697	24	33	2,148	2,391	163	206
Mississippi	1,040	1,176	97	109	939	1,170	80	18	1,979	2,346	177	127
Arkansas	2,116	2,278	188	215	1,027	1,691	63	51	3,143	3,969	251	266
Louisiana	521	577	29	31	899	1,320	34	22	1,420	1,897	63	53
Oklahoma	2,052	2,284	183	176	700	1,118	65	44	2,752	3,402	249	220
Texas	6,059	6,498	489	494	3,027	3,817	518	195	9,086	10,315	1,007	689
Western												
Montana	760	816	55	72	587	572	36	41	1,347	1,389	91	112
Idaho	926	1,033	104	102	1,120	1,343	86	98	2,047	2,376	190	201
Wyoming	528	575	36	38	114	155	8	11	642	730	43	48
Colorado	2,321	2,655	281	278	870	1,089	99	130	3,191	3,744	380	408
New Mexico	817	910	106	120	331	366	16	22	1,147	1,276	122	142
Arizona	774	793	55	63	1,007	1,165	49	128	1,781	1,958	104	191
Utah	462	537	37	38	134	150	11	12	596	687	48	50
Nevada	167	150	14	13	76	80	7	10	243	230	21	23
Washington	982	1,141	99	109	1,860	2,156	166	137	2,841	3,297	244	246
Oregon	655	669	53	61	1,206	1,441	77	72	1,861	2,110	130	133
California	4,741	4,704	438	438	10,781	11,304	554	609	15,522	16,007	992	1,047
Alaska	11	10	1	1	19	20	1	1	29	30	2	2
Hawaii	88	89	7	8	471	500	38	42	559	588	45	50
United States	76,218	78,845	6,592	6,720	61,876	72,431	4,761	4,373	138,094	151,276	11,353	11,092

1/ Sales of farm products include receipts from commodities placed under CCC loans minus value of redemptions during the period. 2/ Estimates as of end of current month. Totals may not add because of rounding.

Information contact: Roger Strickland (202) 786-1804.

Table 35.—Cash Receipts from Farming

	Annual						1988			1989		
	1983	1984	1985	1986	1987	1988	Mar	Nov	Dec	Jan	Feb	Mar
\$ million												
Farm marketings & CCC loans*	136,567	142,436	144,015	135,102	138,094	151,276	10,535	15,301	13,176	13,887	11,353	11,092
Livestock & products	69,438	72,966	69,842	71,568	76,218	78,845	6,292	7,077	6,237	7,058	6,592	6,720
Meat animals	38,893	40,832	38,589	39,122	44,716	45,974	3,827	4,099	3,404	4,235	4,080	3,843
Dairy products	18,763	17,944	18,063	17,753	17,829	17,668	1,474	1,524	1,639	1,611	1,435	1,568
Poultry & eggs	9,981	12,223	11,211	12,678	11,487	12,865	833	1,142	1,045	1,040	938	1,150
Other	1,801	1,967	1,979	1,994	2,187	2,338	159	312	150	172	138	158
Crops	67,129	69,469	74,173	63,554	61,876	72,431	4,243	8,224	6,939	6,829	4,761	4,373
Food grains	9,713	9,740	8,993	5,631	5,411	7,679	261	521	572	604	345	292
Feed crops	15,535	15,668	22,520	16,982	13,061	15,287	800	1,597	1,334	1,426	1,262	1,104
Cotton (lint & seed)	3,705	3,674	3,687	3,351	4,027	4,667	163	874	1,165	729	530	60
Tobacco	2,752	2,813	2,722	1,918	1,827	2,039	1	309	211	374	17	0
Oil-bearing crops	13,566	13,641	12,474	10,592	10,800	13,700	749	1,645	937	1,478	714	731
Vegetables & melons	8,459	9,138	8,558	8,630	9,223	9,785	886	588	556	980	737	1,022
Fruits & tree nuts	6,056	6,737	6,843	7,288	7,869	8,676	478	1,149	951	555	490	258
Other	7,365	8,060	8,378	8,962	9,658	10,599	904	1,541	1,212	684	666	906
Government payments	9,295	8,430	7,704	11,813	16,747	14,480	3,669	513	468	331	2,208	1,103
Total	145,862	150,866	151,719	146,915	154,841	165,756	14,204	15,814	13,644	14,218	13,561	12,195

\*Receipts from loans represent value of commodities placed under CCC loans minus value of redemptions during the month.

Information contact: Roger Strickland (202) 786-1804.

Table 36.—Farm Production Expenses

	Calendar year										
	1980	1981	1982	1983	1984	1985	1986	1987	1988 F	1989 F	
\$ million											
Feed	20,971	20,855	18,592	21,725	19,852	18,015	16,179	16,093	20,600	20,000	to 24,000
Livestock	10,670	8,999	9,684	8,814	9,498	8,958	9,744	12,014	13,200	11,000	to 14,000
Seed	3,220	3,428	3,172	2,993	3,448	3,350	2,984	3,009	3,000	3,000	to 4,000
Farm-Origin inputs	34,861	33,282	31,448	33,532	32,798	30,323	28,907	31,116	36,900	36,000	to 40,000
Fertilizer	9,491	9,409	8,018	7,067	7,429	7,259	5,787	5,392	5,900	6,000	to 8,000
Fuels & oils	7,879	8,570	7,888	7,503	7,143	6,584	4,790	4,442	4,600	4,000	to 6,000
Electricity	1,526	1,747	2,041	2,146	2,166	2,150	1,942	2,393	2,500	2,000	to 3,000
Pesticides	3,539	4,201	4,282	4,154	4,767	4,994	4,485	4,588	4,600	5,000	to 6,000
Manufactured inputs	22,435	23,927	22,229	20,870	21,505	20,987	17,004	16,815	17,600	18,000	to 22,000
Short-term interest	8,717	10,722	11,349	10,615	10,396	8,821	7,795	7,305	7,800	7,000	to 9,000
Real estate interest 1/	7,544	9,142	10,481	10,815	10,733	9,878	9,131	8,202	8,300	7,000	to 9,000
Total interest charges	16,261	19,864	21,830	21,430	21,129	18,699	16,926	15,508	16,000	15,000	to 17,000
Repair & maintenance 1/ 2/	7,075	7,021	6,428	6,529	6,416	6,370	6,426	6,546	7,000	7,000	to 8,000
Contract & hired labor	9,293	8,931	10,075	9,725	9,729	9,799	9,879	10,747	11,400	11,000	to 13,000
Machine hire & custom work	1,823	1,984	2,025	1,896	2,170	2,184	1,810	1,956	2,100	2,000	to 3,000
Marketing, storage, & transportation	3,070	3,523	4,301	3,904	4,012	4,127	3,652	3,823	3,700	4,000	to 5,000
Misc. operating expenses 1/	6,881	6,909	7,262	9,089	9,106	8,232	7,993	8,311	7,600	6,000	to 8,000
Other operating expenses	28,142	28,368	30,089	31,143	31,433	30,712	29,760	31,383	33,200	32,000	to 36,000
Capital consumption 1/	21,474	23,573	24,287	23,873	23,105	20,847	18,916	17,348	16,800	17,000	to 18,000
Taxes 1/	3,891	4,246	4,036	4,469	4,059	4,231	4,125	4,345	4,400	4,000	to 5,000
Net rent to nonoperator landlord	6,075	6,184	6,059	5,060	8,640	8,158	6,698	6,987	7,800	7,000	to 8,000
Other overhead expenses	31,440	34,003	34,381	33,402	35,805	33,236	29,739	28,680	29,100	28,000	to 31,000
Total production expenses	133,139	139,444	139,980	140,377	142,669	133,957	122,335	123,502	132,800	136,000	to 140,000

1/ Includes operator dwellings. 2/ Beginning in 1982, miscellaneous operating expenses include other livestock purchases & dairy assessments. Totals may not add because of rounding. F = forecast.

Information contacts: Chris McGath (202) 786-1804, Andy Bernat (202) 786-1808.

Table 37.—CCC Net Outlays by Commodity &amp; Function

	Fiscal year											
	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989 E	1990 E	
	\$ million											
<b>COMMODITY/PROGRAM</b>												
Feed grains	1,286	-533	5,397	6,815	-758	5,211	12,211	13,967	9,053	3,042	5,562	
Wheat	879	1,543	2,238	3,419	2,536	4,691	3,440	2,836	678	279	1,052	
Rice	-76	24	164	664	333	990	947	906	128	999	959	
Upland cotton	64	336	1,190	1,363	244	1,553	2,142	1,786	668	2,538	994	
Tobacco	-88	-51	103	880	346	455	253	-346	-453	-569	-280	
Dairy	1,011	1,894	2,182	2,528	1,502	2,085	2,337	1,166	1,295	662	893	
Soybeans	116	87	169	288	-585	711	1,597	-476	-1,676	-32	116	
Peanuts	28	28	12	-6	1	12	32	8	7	5	4	
Sugar	-405	-121	-5	49	10	184	214	-65	-246	0	0	
Honey	9	8	27	48	90	81	89	73	100	60	55	
Wool	35	42	54	94	132	109	123	152	1/ 5	89	98	
Operating expense	157	159	294	328	362	346	457	535	614	583	635	
Interest expenditure	518	220	-13	3,525	1,064	1,435	1,411	1,219	395	283	284	
Export programs	-669	-940	65	398	743	134	102	276	200	116	107	
Other	-113	1,340	-225	-1,542	1,295	-314	486	371	1,695	5,788	1,100	
Total	2,752	4,036	11,652	18,851	7,315	17,683	25,841	22,408	12,461	13,843	11,579	
<b>FUNCTION</b>												
Price-support loans (net)	-66	174	7,015	8,438	-27	6,272	13,628	12,199	4,579	-153	1,011	
Direct payments												
Deficiency	79	0	1,185	2,780	612	6,302	6,166	4,833	3,971	5,889	7,006	
Diversion	56	0	0	705	1,504	1,525	64	382	8	0	0	
Dairy termination	0	0	0	0	0	0	489	587	260	200	189	
Other	25	0	0	0	0	0	27	60	0	83	0	
Disaster	258	1,030	306	115	1	0	0	0	6	0	0	
Total direct payments	418	1,030	1,491	3,600	2,117	7,827	6,746	5,862	4,245	6,172	7,195	
1988 crop disaster	0	0	0	0	0	0	0	0	0	3,613	0	
Emergency livestock/ forage assistance	23	329	16	0	0	0	0	0	31	902	8	
Purchases (net)	1,681	1,602	2,031	2,540	1,470	1,331	1,670	-479	-1,131	-10	519	
Producer storage payments	254	32	679	964	268	329	485	832	658	319	174	
Processing, storage, & transportation	259	323	355	665	639	657	1,013	1,659	1,113	654	443	
Operating expense	157	159	294	328	362	346	457	535	614	583	635	
Interest expenditure	518	220	-13	3,525	1,064	1,435	1,411	1,219	395	283	284	
Export programs	-669	-940	65	398	743	134	102	276	200	116	107	
Other	177	1,107	-281	-1,607	679	-648	329	305	1,757	1,364	1,203	
Total	2,752	4,036	11,652	18,851	7,315	17,683	25,841	22,408	12,461	13,843	11,579	

1/ Fiscal year 1988 wool & mohair program outlays were \$130,635,000 but include a one-time advance appropriation of \$126,108,000, which was recorded as a wool program receipt by treasury. E = estimated in the fiscal 1990 President's Budget. Minus (-) indicates a net receipt (excess of repayments or other receipts over gross outlays of funds).

Information contact: Richard Pazdalski (202) 447-5148.

## Food Expenditures

Table 38.—Food Expenditure Estimates

	Annual			1989				1989 year-to-date		
	1986	1987	1988	Feb	Mar	Apr P	May P	Mar	Apr P	May P
	\$ billion									
Sales 1/ Off-premise use 2/ Meals and snacks 3/	237.1 158.2	244.9 174.2	255.7 186.8	20.1 14.1	22.7 16.1	21.9 15.9	23.2 16.4	63.8 45.0	85.6 60.9	108.8 77.2
1988 \$ billion										
Sales 1/ Off-premise use 2/ Meals and snacks 3/	257.6 171.3	255.2 181.3	255.7 186.8	19.2 13.7	21.6 15.6	20.6 15.3	21.7 15.7	61.0 43.8	81.6 59.1	103.3 74.8
Percent change from year earlier (\$ bil.)										
Sales 1/ Off-premise use 2/ Meals and snacks 3/	3.3 6.7	3.3 10.1	4.4 7.2	5.6 4.8	9.0 8.1	5.9 3.8	8.6 3.8	6.8 7.2	6.6 6.3	7.0 5.7
Percent change from year earlier (1988 \$ bil.)										
Sales 1/ Off-premise use 2/ Meals and snacks 3/	.3 2.7	.8 5.8	.2 3.0	-1.5 -1.2	1.2 3.4	-1.7 -.7	-.5 -.9	-.6 2.5	-.9 1.6	-.4 1.1

1/ Food only (excludes alcoholic beverages). Not seasonally adjusted. 2/ Excludes donations and home production. 3/ Excludes donations, child nutrition subsidies, and meals furnished to employees, patients, and inmates. P = preliminary.

NOTE: This table is new to Agricultural Outlook. It differs from Personal Consumption Expenditures (PCE), table 2, for several reasons: (1) this series includes only food, not alcoholic beverages and pet food, which are included in PCE; (2) this series is not seasonally adjusted, whereas PCE is seasonally adjusted at annual rates; (3) this series reports sales only, but PCE includes food produced and consumed on farms and food furnished to employees; (4) this series includes all sales of meals and snacks. PCE includes only purchases using personal funds, excluding business travel and entertainment. For a more complete discussion of the differences, see "Developing an Integrated Information System for the Food Sector," Agr.-Econ. Rpt. No. 575, Aug. 1987.

Information contact: Alden Manchester (202) 786-1880.

## Transportation

Table 39.—Rail Rates; Grain & Fruit/Vegetable Shipments

	Annual			1988			1989			
	1986	1987	1988	Apr	Nov	Dec	Jan	Feb	Mar	Apr
Rail freight rate index 1/ (Dec. 1984=100)										
All products	100.7	100.1	104.8	105.2	105.4	105.4	105.9 P	105.9 P	105.9 P	106.1
Farm products	99.6	99.3	105.6	104.4	108.0	108.0	109.6 P	109.4 P	109.0 P	109.0
Grain	98.9	98.7	105.4	102.7	108.5	108.2	109.8 P	109.7 P	109.2 P	109.2
Food products	99.9	98.6	103.2	103.8	103.6	103.6	103.7 P	103.1 P	103.2 P	103.1
Grain shipments										
Rail carloadings (1,000 cars) 2/	24.4	29.0	30.6	33.0	27.1 P	27.4 P	30.2 P	30.1 P	31.8 P	30.1
Fresh fruit & vegetable shipments										
Piggy back (1,000 cwt) 3/ 4/	629	588	533	541	409	419	374	419	455 P	502 P
Rail ('000 cwt) 3/ 4/	563	660	606	526	691	711	701	583	686 P	571 P
Truck ('000 cwt) 3/ 4/	9,031	9,137	9,533	10,544	9,097	9,341	8,896	8,650	9,391 P	10,293 P
Cost of operating trucks hauling produce 5/										
Owner operator (cts./mile)	113.1	116.3	118.7	118.9	119.6	120.4	121.3	122.1	122.9	124.1
Fleet operation (cts./mile)	113.6	116.5	118.4	118.4	119.1	120.1	121.0	121.4	121.9	123.1

1/ Department of Labor, Bureau of Labor Statistics. 2/ Weekly average; from Association of American Railroads. 3/ Weekly average; from Agricultural Marketing Service, USDA. 4/ Preliminary data for 1988 & 1989. 5/ Office of Transportation, USDA. P = preliminary.

Information contact: T.O. Hutchinson (202) 786-1840.

## **Indicators of Farm Productivity**

**Table 40.—Indexes of Farm Production Input Use & Productivity<sup>1</sup>**

(See the March 1989 issue.)

Information contact: Jim Hauver (202) 786-1459.

## **Food Supply and Use**

**Table 41.—Per Capita Consumption of Major Food Commodities**

(See the March 1989 issue.)

Information contact: Judy Putnam (202) 786-1870.

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